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UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No.	38-21(15454)B
	First Named Inventor or Application Identifier	FISHER, Dane K.
	Title	Nucleic Acid Molecules and Other Molecules Associated with Plants
	Express Mail Label No.	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents</i>	ADDRESS TO: Assistant Commissioner for Patent Box Patent Application Washington, DC 20231
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1. <input checked="" type="checkbox"/> *Fee Transmittal Form (Form PTO-1082) <i>(Submit an original and a duplicate for fee processing)</i>	6. <input type="checkbox"/> Microfiche Computer Program (Appendix)
2. <input checked="" type="checkbox"/> Specification [Total Pages 102] <i>(preferred arrangement set forth below)</i> <ul style="list-style-type: none">- Descriptive title of the Invention- Cross References to Related Applications- Statement Regarding Fed sponsored R&D- Reference to Microfiche Appendix- Background of the Invention- Brief Summary of the Invention- Brief Description of the Drawings (if filed)- Detailed Description- Claims- Abstract of the Disclosure	7. Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i> <ul style="list-style-type: none">a. <input checked="" type="checkbox"/> Computer Readable Copyb. <input checked="" type="checkbox"/> Paper Copy (identical to computer copy)c. <input checked="" type="checkbox"/> Statement verifying identity of above copies
3. <input type="checkbox"/> Drawing(s) (35 USC 113) [Total Sheets]	ACCOMPANYING APPLICATION PARTS 8. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) 9. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i> 10. <input type="checkbox"/> English Translation Document <i>(if applicable)</i> 11. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations 12. <input type="checkbox"/> Preliminary Amendment 13. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Two) <i>(should be specifically itemized)</i> 14. <input type="checkbox"/> *Small Entity Statement(s) <input type="checkbox"/> Statement filed in prior application, Status still proper and desired 15. <input type="checkbox"/> Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. <input type="checkbox"/> Other:
4. Oath or Declaration [Total Pages 6] <ul style="list-style-type: none">a. <input checked="" type="checkbox"/> Newly executed (original or copy)b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 17 completed)</i> <i>[Note Box 5 below]</i>i. <input type="checkbox"/> <u>DELETION OF INVENTOR(S)</u> Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).	
5. <input type="checkbox"/> Incorporation By Reference <i>(useable if Box 4b is checked)</i> The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.	
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17. If a CONTINUING APPLICATION , check appropriate box and supply the requisite information:	
<input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input type="checkbox"/> Continuation-in-part (CIP)	of prior application No: /
Prior Application Information: Examiner:	Group/Art Unit:

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Signature	Lawrence M. Lavin Jr by David R. Marsh		Date September 15, 1999

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Reg. No. 41,408

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application of

Inventors: Dane K. FISHER *et al.*

For: Nucleic Acid Molecules and Other Molecules Associated with Plants

Enclosed are:

- ☒ A Combined Declaration and Power of Attorney, executed by inventor Dane K. Fisher (3 pages).
- ☒ A Combined Declaration and Power of Attorney, executed by inventor Raghunath V. Lalgudi (3 pages).
- ☒ An Information Disclosure Statement.
- ☒ Form PTO-1449 (3 pages) with 8 accompanying documents.
- ☒ Statement Regarding Sequence Listing.
- ☒ A CD-ROM containing the sequence listing.

The filing fee has been calculated as shown below:

(Col. 1)		(Col. 2)	SMALL ENTITY		OR	OTHER THAN A SMALL ENTITY	
FOR	NO. FILED	NO. EXTRA	RATE	FEE		RATE	FEE
BASIC FEE				\$ 395.00	OR		\$ 760.00
TOTAL CLAIMS	7 -20 =	* 0	x 9 =		OR	x 18 =	0.00
INDEP. CLAIMS	3 -3 =	* 0	x 39 =		OR	x 78 =	0.00
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENTED			+ 130 =		OR	+ 260 =	0.00
			TOTAL		OR	TOTAL	\$ 760.00

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☒ The issue fee set in 37 CFR 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 CFR 1.311(b).

☒ Any filing fees under 37 CFR 1.16 for presentation of extra claims.

Date September 15, 1999

Lawrence M. Lavin, Jr. by

Lawrence M. Lavin, Jr. (Reg. No. 30,768)

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Ed R. Marshall
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September 15, 1999

Assistant Commissioner for Patents
Washington, D.C. 20231

Box Patent Application

Re: U.S. Non-Provisional Utility Patent Application
Application No.: To Be Assigned
Filed: Herewith
For: **Nucleic Acid Molecules and Other Molecules
Associated with Plants**
Inventors: Dane K. FISHER *et al.*
Atty. Docket: 38-21(15454)B

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.
Patent and Trademark Office:

1. Utility Patent Application Transmittal (PTO/SB/05);
2. Form PTO-1082 (in duplicate);
3. U.S. Utility Patent Application entitled:

Nucleic Acid Molecules and Other Molecules Associated with Plants

and naming as inventors:

Dane K. FISHER and Raghunath V. LALGUDI

the application consisting of:

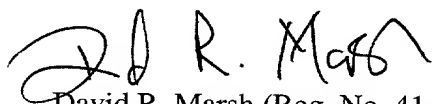
- a. A specification containing:
 - (i) 100 pages of a description prior to the claims;
 - (ii) 1 page of claims (7 claims);
 - (iii) a one (1) page abstract; and
 - (iv) 24,446 pages of a sequence listing;

4. A Combined Declaration and Power of Attorney, executed by inventor Dane K. Fisher (3 pages);
5. A Combined Declaration and Power of Attorney, executed by inventor Raghunath V. Lalgudi (3 pages);
6. Statement Regarding Sequence Submission;
7. A CD-ROM containing the sequence listing;
8. Information Disclosure Statement;
9. Form PTO-1449 (3 pages), with 8 accompanying documents;
10. Howrey & Simon Check No. 316232 in the amount of \$760.00 to cover the basic filing fee; and
11. Two (2) return postcards.

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible.

In accordance with 37 C.F.R. § 1.821(f), the paper copy of the sequence listing and the computer readable copy of the sequence listing submitted herewith in the above application are the same.

Respectfully submitted,



David R. Marsh (Reg. No. 41,408)

Enclosures

NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH PLANTS

5

Field of the Invention

The present invention is in the field of plant biochemistry. More specifically the invention relates to nucleic acid molecules that encode proteins and fragments of proteins produced in plant cells, in particular, maize plants. The invention also relates to proteins and fragments of proteins so encoded and antibodies capable of binding the proteins. The invention also relates to methods of using the nucleic acid molecules, proteins and fragments of proteins.

Background of the Invention

I. EXPRESSED SEQUENCE TAG NUCLEIC ACID MOLECULES

Expressed sequence tags, or ESTs, are short sequences of randomly selected clones from a cDNA (or complementary DNA) library which are representative of the cDNA inserts of these randomly selected clones. McCombie, *et al.*, *Nature Genetics*, 1:124-130 (1992); Kurata, *et al.*, *Nature Genetics*, 8: 365-372 (1994); Okubo, *et al.*, *Nature Genetics*, 2: 173-179 (1992), all of which references are incorporated herein in their entirety.

Using conventional methodologies, cDNA libraries can be constructed from the mRNA (messenger RNA) of a given tissue or organism using poly dT primers and reverse transcriptase (Efstratiadis, *et al.*, *Cell* 7:279-288 (1976), the entirety of which is herein incorporated by reference; Higuchi, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 73:3146-3150 (1976), the entirety of which is herein incorporated by reference; Maniatis, *et al.*, *Cell* 8:163 (1976) the entirety of which is herein incorporated by reference; Land, *et al.*, *Nucleic Acids Res.* 9:2251-2266 (1981), the entirety of which is herein incorporated by

reference; Okayama, *et al.*, *Mol. Cell. Biol.* 2:161-170 (1982), the entirety of which is herein incorporated by reference; Gubler, *et al.*, *Gene* 25:263 (1983), the entirety of which is herein incorporated by reference).

Several methods may be employed to obtain full-length cDNA constructs. For example, terminal transferase can be used to add homopolymeric tails of dC residues to the free 3' hydroxyl groups (Land, *et al.*, *Nucleic Acids Res.* 9:2251-2266 (1981), the entirety of which is herein incorporated by reference). This tail can then be hybridized by a poly dG oligo which can act as a primer for the synthesis of full length second strand cDNA. Okayama and Berg, report a method for obtaining full length cDNA constructs.

This method has been simplified by using synthetic primer-adapters that have both homopolymeric tails for priming the synthesis of the first and second strands and restriction sites for cloning into plasmids (Coleclough, *et al.*, *Gene* 34:305-314 (1985), the entirety of which is herein incorporated by reference) and bacteriophage vectors (Krawinkel, *et al.*, *Nucleic Acids Res.* 14:1913 (1986), the entirety of which is herein incorporated by reference; and Han, *et al.*, *Nucleic Acids Res.* 15:6304 (1987), the entirety of which is herein incorporated by reference).

These strategies have been coupled with additional strategies for isolating rare mRNA populations. For example, a typical mammalian cell contains between 10,000 and 30,000 different mRNA sequences. Davidson, *Gene Activity in Early Development*, 2nd ed., Academic Press, New York (1976). The number of clones required to achieve a given probability that a low-abundance mRNA will be present in a cDNA library is $N = (\ln(1-P))/(\ln(1-1/n))$ where N is the number of clones required, P is the probability desired, and 1/n is the fractional proportion of the total mRNA that is represented by a single rare mRNA. (Sambrook, *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd ed., Cold Spring Harbor Laboratory Press (1989), the entirety of which is herein incorporated by reference.).

A method to enrich preparations of mRNA for sequences of interest is to fractionate by size. One such method is to fractionate by electrophoresis through an agarose gel (Pennica, *et al.*, *Nature* 301:214-221 (1983), the entirety of which is herein incorporated by reference). Another such method employs sucrose gradient

5 centrifugation in the presence of an agent, such as methylmercuric hydroxide, that denatures secondary structure in RNA (Schweinfest, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 79:4997-5000 (1982), the entirety of which is herein incorporated by reference).

A frequently adopted method is to construct equalized or normalized cDNA libraries (Ko, *Nucleic Acids Res.* 18:5705-5711 (1990), the entirety of which is herein

10 incorporated by reference; Patanjali, S. R. *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:1943-1947 (1991), the entirety of which is herein incorporated by reference). Typically, the cDNA population is normalized by subtractive hybridization. Schmid, *et al.*, *J. Neurochem.* 48:307-312 (1987) the entirety of which is herein incorporated by reference; Fargnoli, *et al.*, *Anal. Biochem.* 187:364-373 (1990) the entirety of which is herein

15 incorporated by reference; Travis, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:1696-1700 (1988) the entirety of which is herein incorporated by reference; Kato, *Eur. J. Neurosci.* 2:704 (1990); and Schweinfest, *et al.*, *Genet. Anal. Tech. Appl.* 7:64 (1990), the entirety of which is herein incorporated by reference). Subtraction represents another method for reducing the population of certain sequences in the cDNA library. Swaroop, *et al.*,

20 *Nucleic Acids Res.* 19:1954 (1991), the entirety of which is herein incorporated by reference).

ESTs can be sequenced by a number of methods. Two basic methods may be used for DNA sequencing, the chain termination method of Sanger *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 74: 5463-5467 (1977), the entirety of which is herein incorporated by

25 reference and the chemical degradation method of Maxam and Gilbert, *Proc. Nat. Acad. Sci. (U.S.A.)* 74: 560-564 (1977), the entirety of which is herein incorporated by reference. Automation and advances in technology such as the replacement of

radioisotopes with fluorescence-based sequencing have reduced the effort required to sequence DNA (Craxton, *Methods*, 2: 20-26 (1991), the entirety of which is herein incorporated by reference; Ju *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 92: 4347-4351 (1995), the entirety of which is herein incorporated by reference; Tabor and Richardson, *Proc.*

5 *Natl. Acad. Sci. (U.S.A.)* 92: 6339-6343 (1995), the entirety of which is herein incorporated by reference). Automated sequencers are available from, for example, Pharmacia Biotech, Inc., Piscataway, New Jersey (Pharmacia ALF), LI-COR, Inc., Lincoln, Nebraska (LI-COR 4,000) and Millipore, Bedford, Massachusetts (Millipore BaseStation).

10 In addition, advances in capillary gel electrophoresis have also reduced the effort required to sequence DNA and such advances provide a rapid high resolution approach for sequencing DNA samples (Swerdlow and Gesteland, *Nucleic Acids Res.* 18:1415-1419 (1990); Smith, *Nature* 349:812-813 (1991); Luckey *et al.*, *Methods Enzymol.* 218:154-172 (1993); Lu *et al.*, *J. Chromatog. A.* 680:497-501 (1994); Carson *et al.*, *Anal.* 15 *Chem.* 65:3219-3226 (1993); Huang *et al.*, *Anal. Chem.* 64:2149-2154 (1992); Kheterpal *et al.*, *Electrophoresis* 17:1852-1859 (1996); Quesada and Zhang, *Electrophoresis* 17:1841-1851 (1996); Baba, *Yakugaku Zasshi* 117:265-281 (1997), all of which are herein incorporated by reference in their entirety).

ESTs longer than 150 bases have been found to be useful for similarity searches and mapping. (Adams, *et al.*, *Science* 252:1651-1656 (1991), herein incorporated by 20 reference.) EST sequences normally range from 150-450 bases. This is the length of sequence information that is routinely and reliably generated using single run sequence data. Typically, only single run sequence data is obtained from the cDNA library, Adams, *et al.*, *Science* 252:1651-1656 (1991). Automated single run sequencing 25 typically results in an approximately 2-3% error or base ambiguity rate. (Boguski, *et al.*, *Nature Genetics*, 4:332-333 (1993), the entirety of which is herein incorporated by reference).

- EST databases have been constructed or partially constructed from, for example, *C. elegans* (McCombie, *et al.*, *Nature Genetics* 1:124-131 (1992), human liver cell line HepG2 (Okubo, *et al.*, *Nature Genetics* 2:173-179 (1992)), human brain RNA (Adams, *et al.*, *Science* 252:1651-1656 (1991); Adams, *et al.*, *Nature* 355:632-635 (1992)),
- 5 *Arabidopsis*, (Newman, *et al.*, *Plant Physiol.* 106:1241-1255 (1994)); and rice (Kurata, *et al.*, *Nature Genetics* 8:365-372 (1994)).

II. SEQUENCE COMPARISONS

- A characteristic feature of a protein or DNA sequence is that it can be compared with other known protein or DNA sequences. Sequence comparisons can be undertaken
- 10 by determining the similarity of the test or query sequence with sequences in publicly available or propriety databases ("similarity analysis") or by searching for certain motifs ("intrinsic sequence analysis")(e.g. *cis* elements)(Coulson, *Trends in Biotechnology*, 12: 76-80 (1994), the entirety of which is herein incorporated by reference; Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997), the entirety of which is herein incorporated by
- 15 reference).

- Similarity analysis includes database search and alignment. Examples of public databases include the DNA Database of Japan (DDBJ)(<http://www.ddbj.nig.ac.jp/>); Genebank (<http://www.ncbi.nlm.nih.gov/web/Genbank/Index.html>); and the European Molecular Biology Laboratory Nucleic Acid Sequence Database (EMBL)
- 20 (http://www.ebi.ac.uk/ebi_docs/embl_db.html). A number of different search algorithms have been developed, one example of which are the suite of programs referred to as BLAST programs. There are five implementations of BLAST, three designed for nucleotide sequences queries (BLASTN, BLASTX, and TBLASTX) and two designed for protein sequence queries (BLASTP and TBLASTN) (Coulson, *Trends in*
- 25 *Biotechnology*, 12: 76-80 (1994); Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997)).

BLASTN takes a nucleotide sequence (the query sequence) and its reverse complement and searches them against a nucleotide sequence database. BLASTN was designed for speed, not maximum sensitivity, and may not find distantly related coding sequences. BLASTX takes a nucleotide sequence, translates it in three forward reading frames and three reverse complement reading frames, and then compares the six translations against a protein sequence database. BLASTX is useful for sensitive analysis of preliminary (single-pass) sequence data and is tolerant of sequencing errors (Gish and States, *Nature Genetics*, 3: 266-272 (1993), the entirety of which is herein incorporated by reference). BLASTN and BLASTX may be used in concert for analyzing EST data (Coulson, *Trends in Biotechnology*, 12: 76-80 (1994); Birren, *et al.*, *Genome Analysis*, 1: 543-559 (1997).

Given a coding nucleotide sequence and the protein it encodes, it is often preferable to use the protein as the query sequence to search a database because of the greatly increased sensitivity to detect more subtle relationships. This is due to the larger alphabet of proteins (20 amino acids) compared with the alphabet of nucleic acid sequences (4 bases), where it is far easier to obtain a match by chance. In addition, with nucleotide alignments, only a match (positive score) or a mismatch (negative score) is obtained, but with proteins, the presence of conservative amino acid substitutions can be taken into account. Here, a mismatch may yield a positive score if the non-identical residue has physical/chemical properties similar to the one it replaced. Various scoring matrices are used to supply the substitution scores of all possible amino acid pairs. A general purpose scoring system is the BLOSUM62 matrix (Henikoff and Henikoff, *Proteins*, 17: 49-61 (1993), the entirety of which is herein incorporated by reference), which is currently the default choice for BLAST programs. BLOSUM62 is tailored for alignments of moderately diverged sequences and thus may not yield the best results under all conditions. Altschul, *J. Mol. Biol.* 36: 290-300 (1993), the entirety of which is herein incorporated by reference, uses a combination of three matrices to cover all

contingencies. This may improve sensitivity, but at the expense of slower searches. In practice, a single BLOSUM62 matrix is often used but others (PAM40 and PAM250) may be attempted when additional analysis is necessary. Low PAM matrices are directed at detecting very strong but localized sequence similarities, whereas high PAM matrices are directed at detecting long but weak alignments between very distantly related sequences.

Homologues in other organisms are available that can be used for comparative sequence analysis. Multiple alignments are performed to study similarities and differences in a group of related sequences. CLUSTAL W is a multiple sequence alignment package available that performs progressive multiple sequence alignments based on the method of Feng and Doolittle, *J. Mol. Evol.* 25: 351-360 (1987), the entirety of which is herein incorporated by reference. Each pair of sequences is aligned and the distance between each pair is calculated; from this distance matrix, a guide tree is calculated, and all of the sequences are progressively aligned based on this tree. A feature of the program is its sensitivity to the effect of gaps on the alignment; gap penalties are varied to encourage the insertion of gaps in probable loop regions instead of in the middle of structured regions. Users can specify gap penalties, choose between a number of scoring matrices, or supply their own scoring matrix for both the pairwise alignments and the multiple alignments. CLUSTAL W for UNIX and VMS systems is available at: [ftp.ebi.ac.uk](ftp://ftp.ebi.ac.uk). Another program is MACAW (Schuler *et al.*, *Proteins, Struct. Func. Genet.* 9:180-190 (1991), the entirety of which is herein incorporated by reference, for which both Macintosh and Microsoft Windows versions are available. MACAW uses a graphical interface, provides a choice of several alignment algorithms, and is available by anonymous ftp at: [ncbi.nlm.nih.gov \(directory/pub/macaw\)](ftp://ncbi.nlm.nih.gov/directory/pub/macaw).

Sequence motifs are derived from multiple alignments and can be used to examine individual sequences or an entire database for subtle patterns. With motifs, it is sometimes possible to detect distant relationships that may not be demonstrable based on

comparisons of primary sequences alone. Currently, the largest collection of sequence motifs in the world is PROSITE (Bairoch and Bucher, *Nucleic Acid Research*, 22: 3583-3589 (1994), the entirety of which is herein incorporated by reference.) PROSITE may be accessed via either the ExPASy server on the World Wide Web or anonymous ftp site.

- 5 Many commercial sequence analysis packages also provide search programs that use PROSITE data.

A resource for searching protein motifs is the BLOCKS E-mail server developed by S. Henikoff, *Trends Biochem Sci.*, 18:267-268 (1993), the entirety of which is herein incorporated by reference; Henikoff and Henikoff, *Nucleic Acid Research*, 19:6565-6572
10 (1991), the entirety of which is herein incorporated by reference; Henikoff and Henikoff, *Proteins*, 17: 49-61 (1993). BLOCKS searches a protein or nucleotide sequence against a database of protein motifs or "blocks." Blocks are defined as short, ungapped multiple alignments that represent highly conserved protein patterns. The blocks themselves are derived from entries in PROSITE as well as other sources. Either a protein or nucleotide
15 query can be submitted to the BLOCKS server; if a nucleotide sequence is submitted, the sequence is translated in all six reading frames and motifs are sought in these conceptual translations. Once the search is completed, the server will return a ranked list of significant matches, along with an alignment of the query sequence to the matched BLOCKS entries.

- 20 Conserved protein domains can be represented by two-dimensional matrices, which measure either the frequency or probability of the occurrences of each amino acid residue and deletions or insertions in each position of the domain. This type of model, when used to search against protein databases, is sensitive and usually yields more accurate results than simple motif searches. Two popular implementations of this
25 approach are profile searches (such as GCG program ProfileSearch) and Hidden Markov Models (HMMs)(Krough *et al.*, *J. Mol. Biol.* 235:1501-1531 (1994); Eddy, *Current Opinion in Structural Biology* 6:361-365 (1996), both of which are herein incorporated

by reference in their entirety). In both cases, a large number of common protein domains have been converted into profiles, as present in the PROSITE library, or HMM models, as in the Pfam protein domain library (Sonnhammer *et al.*, *Proteins* 28:405-420 (1997), the entirety of which is herein incorporated by reference). Pfam contains more than 500

5 HMM models for enzymes, transcription factors, signal transduction molecules, and structural proteins. Protein databases can be queried with these profiles or HMM models, which will identify proteins containing the domain of interest. For example, HMMSW or HMMFS, two programs in a public domain package called HMMER (Sonnhammer *et al.*, *Proteins* 28:405-420 (1997)) can be used.

10 PROSITE and BLOCKS represent collected families of protein motifs. Thus, searching these databases entails submitting a single sequence to determine whether or not that sequence is similar to the members of an established family. Programs working in the opposite direction compare a collection of sequences with individual entries in the protein databases. An example of such a program is the Motif Search Tool, or MoST
15 (Tatusov *et al. Proc. Natl. Acad. Sci.* 91: 12091-12095 (1994), the entirety of which is herein incorporated by reference.) On the basis of an aligned set of input sequences, a weight matrix is calculated by using one of four methods (selected by the user); a weight matrix is simply a representation, position by position in an alignment, of how likely a particular amino acid will appear. The calculated weight matrix is then used to search the
20 databases. To increase sensitivity, newly found sequences are added to the original data set, the weight matrix is recalculated, and the search is performed again. This procedure continues until no new sequences are found.

Summary of the Invention

The present invention provides a substantially purified nucleic acid molecule that
25 encodes a maize protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264.

The present invention also provides one or more substantially purified nucleic acid molecules comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof.

5 The present invention also provides a substantially purified maize protein or fragment thereof, wherein said maize protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264.

10 The present invention further provides a substantially purified protein, peptide, or fragment thereof encoded by a nucleic acid sequence which specifically hybridizes to a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO: 1 through SEQ ID NO:57264.

15 The present invention further provides a substantially purified antibody capable of specifically binding to a protein or fragment thereof encoded by a nucleic acid sequence which specifically hybridizes to a nucleic acid molecule having a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO:1 through SEQ ID NO:57264.

20 The present invention also provides a transformed plant transformed to contain a nucleic acid molecule which comprises: (A) an exogenous promoter region which functions in plant cells to cause the production of an mRNA molecule; which is linked to (B) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid molecule that encodes a protein, peptide, or fragment thereof which hybridizes to a nucleic acid sequence selected from the group consisting of a complement of SEQ ID NO:1 through SEQ ID NO:57264 expressed in an effective amount to produce a desirable agronomic effect; which is linked to (C) a 3' non-
25 translated sequence that functions in plant cells to cause the termination of transcription and the addition of polyadenylated ribonucleotides to the 3' end of the mRNA sequence.

The present invention also provides a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof, wherein the transcribed strand of said nucleic acid is complementary to a nucleic acid molecule that encodes a protein or fragment thereof. The present invention also provides
 5 bacterial, viral, microbial, and plant cells comprising a nucleic acid molecule of the present invention

The present invention also provides a method of producing a plant containing one or more proteins encoded by sequences comprising SEQ ID NO:1 or complement thereof through SEQ ID NO:57264 or complements thereof, expressed in a sufficient amount
 10 and/or fashion to produce a desirable agronomic effect.

In accomplishing the foregoing, there is provided, in accordance with one aspect of the present invention, methods of producing genetically transformed plants, comprising the steps of:

- (a) inserting into the genome of a plant cell a recombinant, double-stranded
 15 DNA molecule comprising
 - (i) a promoter which functions in plant cells to cause the production of an RNA sequence,
 - (ii) a structural DNA sequence that causes the production of an RNA sequence which encodes a desired protein.
 - (iii) a 3' non-translated DNA sequence which functions in plant cells to
 20 cause the addition of polyadenylated nucleotides to the 3' end of RNA sequence; where the promoter is homologous or heterologous with respect to the coding sequence and adapted to cause sufficient expression of a protein in desired plant tissues to enhance the
 25 agronomic utility of a plant transformed with said gene.

- (b) obtaining a transformed plant cell with said nucleic acid molecule that encodes one or more proteins, wherein said nucleic acid molecule is transcribed and results in expression of said protein(s); and
- (c) regenerating from the transformed plant cell a genetically transformed plant

The present invention also encompasses differentiated plants, seeds, and progeny comprising said transformed plant cells and which exhibit novel properties of agronomic significance.

The present invention also provides a method of producing a plant containing reduced levels of a protein comprising: (A) transforming a plant cell with a nucleic acid molecule that encodes a protein, wherein said nucleic acid molecule is transcribed and results in co-suppression of endogenous protein synthesis activity, and (B) regenerating plants and producing subsequent progeny from the transformed plant.

The present invention also provides a method of determining an association between a polymorphism and a plant trait comprising: (A) hybridizing a nucleic acid molecule specific for a polymorphism to genetic material of a plant, wherein said nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof; and (B) calculating the degree of association between the polymorphism and the plant trait.

The present invention also provides a method of isolating a genetic region, or nucleic acid that encodes a protein or fragment thereof comprising: (A) incubating under conditions permitting nucleic acid hybridization: a marker nucleic acid molecule, preferably an EST, with a complementary nucleic acid molecule obtained from a plant cell or plant tissue; (B) permitting hybridization between said marker nucleic acid molecule, preferably an EST, and said complementary nucleic acid molecule obtained from said plant cell or plant tissue; and (C) isolating said complementary nucleic acid molecule.

The present invention also provides a method for determining a level or pattern in a plant cell of a protein in a plant comprising: (A) incubating, under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, the marker nucleic acid molecule selected from the group of marker nucleic acid molecules which

- 5 specifically hybridize to a nucleic acid molecule having the nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof or fragments of either, with a complementary nucleic acid molecule obtained from the plant cell or plant tissue, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained
- 10 from the plant cell or plant tissue permits the detection of an mRNA for the enzyme; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant cell or plant tissue; and (C) detecting the level or pattern of the complementary nucleic acid, wherein the detection of the complementary nucleic acid is predictive of the level or pattern of the protein.

- 15 The present invention also provides a method for determining the level or pattern of a protein in a plant cell or plant tissue comprising: (A) incubating under conditions permitting nucleic acid hybridization: a marker nucleic acid molecule, the marker nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof, with a
- 20 complementary nucleic acid molecule obtained from a plant cell or plant tissue, wherein nucleic acid hybridization between the marker nucleic acid molecule, and the complementary nucleic acid molecule obtained from the plant cell or plant tissue permits the detection of said protein; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant cell
- 25 or plant tissue; and (C) detecting the level or pattern of the complementary nucleic acid, wherein the detection of said complementary nucleic acid is predictive of the level or pattern of the protein synthesis.

The present invention also provides a method for determining a level or pattern of a protein in a plant cell or plant tissue which comprises assaying the concentration of a molecule, whose concentration is dependent upon the expression of a gene, the gene having a nucleic acid sequence which specifically hybridizes to a protein marker nucleic acid molecule, the molecule being present in a plant cell or plant tissue, in comparison to the concentration of that molecule present in a plant cell or plant tissue with a known level or pattern of said protein, wherein an assayed concentration of the molecule is compared to the assayed concentration of the molecule in a plant cell or plant tissue with a known level or pattern of said protein.

The present invention also provides a method of determining a mutation in a plant whose presence is predictive of a mutation affecting a level or pattern of a protein comprising the steps: (A) incubating, under conditions permitting nucleic acid hybridization, a marker nucleic acid, the marker nucleic acid selected from the group of marker nucleic acid molecules which specifically hybridize to a nucleic acid molecule consisting of the nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof or fragments of either and a complementary nucleic acid molecule obtained from the plant, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant permits the detection of a polymorphism whose presence is predictive of a mutation affecting the level or pattern of the protein in the plant; (B) permitting hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant; and (C) detecting the presence of the polymorphism, wherein the detection of the polymorphism is predictive of the mutation.

The present invention also provides a method for determining a mutation in a plant whose presence is predictive of a mutation affecting the level or pattern of protein synthesis comprising the steps: (A) incubating under conditions permitting nucleic acid

hybridization: a marker nucleic acid molecule, the marker nucleic acid molecule comprising a nucleic acid molecule that is linked to gene, the gene having a nucleic acid sequence which specifically hybridizes to a sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO:57264 and complements thereof, and a

- 5 complementary nucleic acid molecule obtained from a plant tissue or plant cell of the plant, wherein nucleic acid hybridization between the marker nucleic acid molecule and the complementary nucleic acid molecule obtained from the plant permits the detection of a polymorphism whose presence is predictive of a mutation affecting said level or pattern of a protein synthesis in the plant; (B) permitting hybridization between said marker
- 10 nucleic acid molecule and said complementary nucleic acid molecule obtained from said plant; and; (C) detecting the presence of the polymorphism, wherein the detection of the polymorphism is predictive of the mutation.

- 15 The present invention also provides a method for reducing expression of a protein in a plant cell, the method comprising: growing a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof, wherein the transcribed strand of said nucleic acid is complementary to a nucleic acid molecule that encodes the protein in said plant cell, and whereby the strand that is complementary to the nucleic acid molecule that encodes the protein reduces or depresses expression of the protein.

- 20 The present invention provides maize nucleic acid molecules for use as molecular tags to isolate genetic regions (i.e. promoters and flanking sequences), isolate genes, map genes, and determine gene function. The present invention further provides maize nucleic acid molecules for use in determining if genes are members of a particular gene family.

- 25 The present invention also provides a method of obtaining full length genes using maize ESTs or complements thereof or fragments of either.

The present invention also provides a method of isolating promoters and flanking sequences using maize ESTs or complements thereof or fragments of either.

The present invention also provides maize ESTs or complements thereof or fragments of either for use in marker-assisted breeding programs.

5 The present invention also provides a method of identifying tissues comprising hybridizing nucleic acids from the tissue with maize ESTs or complements thereof or fragments of either.

The present invention also provides a method for production of antibodies targeted against the proteins, peptides, or fragments produced by the disclosed or
10 complements thereof or fragments of either.

The present invention also provides a method for the transformation and regeneration of plants comprising sequences hybridizable to the disclosed ESTs or complements thereof or fragments of either.

The present invention also provides a method of modifying plant protein
15 expression by inserting in a chimeric gene sense or antisense constructs of the maize ESTs.

Detailed Description of the Invention

Agents

(a) Nucleic Acid Molecules

20 Agents of the present invention include nucleic acid molecules and more specifically EST nucleic acid molecules or nucleic acid fragment molecules thereof. Fragment EST nucleic acid molecules may encode significant portion(s) of, or indeed most of, the EST nucleic acid molecule. Alternatively, the fragments may comprise smaller oligonucleotides (having from about 15 to about 250 nucleotide residues, and
25 more preferably, about 15 to about 30 nucleotide residues).

A subset of the nucleic acid molecules of the present invention includes nucleic acid molecules that are marker molecules. Another subset of the nucleic acid molecules of the present invention include nucleic acid molecules that encode a protein or fragment thereof. Another subset of the nucleic acid molecules of the present invention are EST
 5 molecules.

As used herein, an agent, be it a naturally occurring molecule or otherwise may be “substantially purified,” if desired, such that one or more molecules that is or may be present in a naturally occurring preparation containing that molecule will have been removed or will be present at a lower concentration than that at which it would normally
 10 be found.

The agents of the present invention will preferably be “biologically active” with respect to either a structural attribute, such as the capacity of a nucleic acid to hybridize to another nucleic acid molecule, or the ability of a protein to be bound by antibody (or to compete with another molecule for such binding). Alternatively, such an attribute may be
 15 catalytic, and thus involve the capacity of the agent to mediate a chemical reaction or response.

The agents of the present invention may also be recombinant. As used herein, the term recombinant means any agent (e.g. DNA, peptide etc.), that is, or results, however indirect, from human manipulation of a nucleic acid molecule.

20 It is understood that the agents of the present invention may be labeled with reagents that facilitate detection of the agent (e.g. fluorescent labels (Prober, *et al.*, *Science* 238:336-340 (1987); Albarella *et al.*, EP 144914, chemical labels (Sheldon *et al.*, U.S. Patent 4,582,789; Albarella *et al.*, U.S. Patent 4,563,417, modified bases (Miyoshi *et al.*, EP 119448, all of which are hereby incorporated by reference in their entirety).

25 It is further understood, that the present invention provides bacterial, viral, microbial, and plant cells comprising the agents of the present invention.

Nucleic acid molecules or fragment thereof of the present invention are capable of specifically hybridizing to other nucleic acid molecules under certain circumstances. As used herein, two nucleic acid molecules are said to be capable of specifically hybridizing to one another if the two molecules are capable of forming an anti-parallel, double-

5 stranded nucleic acid structure. A nucleic acid molecule is said to be the "complement" of another nucleic acid molecule if they exhibit complete complementarity. As used herein, molecules are said to exhibit "complete complementarity" when every nucleotide of one of the molecules is complementary to a nucleotide of the other. Two molecules are said to be "minimally complementary" if they can hybridize to one another with

10 sufficient stability to permit them to remain annealed to one another under at least conventional "low-stringency" conditions. Similarly, the molecules are said to be "complementary" if they can hybridize to one another with sufficient stability to permit them to remain annealed to one another under conventional "high-stringency" conditions. Conventional stringency conditions are described by Sambrook, *et al.*, In: *Molecular*

15 *Cloning, A Laboratory Manual, 2nd Edition, Cold Spring Harbor Press, Cold Spring Harbor, New York (1989)*, and by Haymes, *et al.* In: *Nucleic Acid Hybridization, A Practical Approach*, IRL Press, Washington, DC (1985), the entirety of which is herein incorporated by reference. Departures from complete complementarity are therefore permissible, as long as such departures do not completely preclude the capacity of the

20 molecules to form a double-stranded structure. Thus, in order for an nucleic acid molecule or fragment of the present invention to serve as a primer or probe it need only be sufficiently complementary in sequence to be able to form a stable double-stranded structure under the particular solvent and salt concentrations employed.

Appropriate stringency conditions which promote DNA hybridization are, for

25 example, 6.0 x sodium chloride/sodium citrate (SSC) at about 45°C, followed by a wash of 2.0 x SSC at 50°C, are known to those skilled in the art or can be found in *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989), 6.3.1-6.3.6. For

example, the salt concentration in the wash step can be selected from a low stringency of about 2.0 x SSC at 50°C to a high stringency of about 0.2 x SSC at 50°C. In addition, the temperature in the wash step can be increased from low stringency conditions at room temperature, about 22°C, to high stringency conditions at about 65°C. Both temperature and salt may be varied, or either the temperature or the salt concentration may be held constant while the other variable is changed.

In a preferred embodiment, a nucleic acid of the present invention will specifically hybridize to one or more of the nucleic acid molecules set forth in SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof under moderately stringent conditions, for example, at about 2.0 x SSC and about 65°C.

In a particularly preferred embodiment, a nucleic acid of the present invention will include those nucleic acid molecules that specifically hybridize to one or more of the nucleic acid molecules set forth in SEQ ID NO:1 through SEQ ID NO: 57264 or complements thereof under high stringency conditions.

In one aspect of the present invention, the nucleic acid molecules of the present invention have one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In another aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 90% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In a further aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 95% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In a more preferred aspect of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 98% sequence identity with one or more of the nucleic acid sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In an even more preferred aspect

of the present invention, one or more of the nucleic acid molecules of the present invention share between 100% and 99% sequence identity with one or more of the sequences set forth in SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof. In a further, even more preferred aspect of the present invention, one or more of

5 the nucleic acid molecules of the present invention exhibit 100% sequence identity with one or more nucleic acid molecules present within the cDNA libraries LIB143, LIB148, LIB189, LIB3059, LIB3060, LIB3062, LIB3066, LIB3067, LIB3068, LIB3069, LIB3075, LIB3076, LIB3078, LIB3079, and LIB3088 (Monsanto Company, St. Louis, Missouri, United States of America).

10 In a preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of another plant protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of a fungal protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a

15 homologue of a mammalian protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of an algal protein. In another preferred embodiment of the present invention, a maize protein or fragment thereof of the present invention is a homologue of a bacterial protein. In another preferred embodiment of the present invention, a maize protein or fragment

20 thereof of the present invention is a homologue of a soybean protein.

In a preferred embodiment of the present invention, the nucleic molecule of the present invention encodes a maize protein or fragment thereof where a maize protein or fragment thereof exhibits a BLAST probability score of greater than $1E-12$, preferably a BLAST probability score of between about $1E-30$ and about $1E-12$, even more preferably

25 a BLAST probability score of greater than $1E-30$ with its homologue.

In another preferred embodiment of the present invention, the nucleic acid molecule encoding a maize protein or fragment thereof exhibits a % identity with its

homologue of between about 25% and about 40%, more preferably of between about 40% and about 70%, even more preferably of between about 70% and about 90% and even more preferably between about 90% and 99%. In another preferred embodiment, of the present invention, a maize protein or fragment thereof exhibits a % identity with its
 5 homologue of 100%.

In a preferred embodiment of the present invention, the nucleic acid molecule of the present invention encodes a maize protein or fragment thereof where the maize protein exhibits a BLAST score of greater than 120, preferably a BLAST score of between about 1450 and about 120, even more preferably a BLAST score of greater than
 10 1450 with its homologue.

Nucleic acid molecules of the present invention also include non-maize homologues. Preferred non-maize homologues are selected from the group consisting of alfalfa, *Arabidopsis*, barley, *Brassica*, broccoli, cabbage, citrus, cotton, garlic, oat, oilseed rape, onion, canola, flax, an ornamental plant, pea, peanut, pepper, potato, rice, rye,
 15 sorghum, soybean strawberry, sugarcane, sugarbeet, tomato, wheat, poplar, pine, fir, eucalyptus, apple, lettuce, lentils, grape, banana, tea, turf grasses, sunflower, oil palm and *Phaseolus*.

The degeneracy of the genetic code, which allows different nucleic acid sequences to code for the same protein or peptide, is known in the literature. (U.S. Patent No.
 20 4,757,006, the entirety of which is herein incorporated by reference).

In an aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a soybean protein or fragment thereof in SEQ ID NO: 1 through SEQ ID NO: 57264 due to the degeneracy in the genetic code in that they encode the same protein but differ in nucleic
 25 acid sequence.

In another further aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a

soybean protein or fragment thereof in SEQ ID NO: 1 through SEQ ID NO: 57264 due to the fact that the different nucleic acid sequences encode a protein having one or more conservative amino acid residues.

It is understood that codons capable of coding for such conservative amino acid substitutions are known in the art.

It is well known in the art that one or more amino acids in a native sequence can be substituted with another amino acid(s), the charge and polarity of which are similar to that of the native amino acid, *i.e.*, a conservative amino acid substitution, resulting in a silent change. Conserved substitutes for an amino acid within the native polypeptide sequence can be selected from other members of the class to which the naturally occurring amino acid belongs. Amino acids can be divided into the following four groups: (1) acidic amino acids, (2) basic amino acids, (3) neutral polar amino acids, and (4) neutral nonpolar amino acids. Representative amino acids within these various groups include, but are not limited to, (1) acidic (negatively charged) amino acids such as aspartic acid and glutamic acid; (2) basic (positively charged) amino acids such as arginine, histidine, and lysine; (3) neutral polar amino acids such as glycine, serine, threonine, cysteine, cystine, tyrosine, asparagine, and glutamine; and (4) neutral nonpolar (hydrophobic) amino acids such as alanine, leucine, isoleucine, valine, proline, phenylalanine, tryptophan, and methionine.

Conservative amino acid changes within the native polypeptides sequence can be made by substituting one amino acid within one of these groups with another amino acid within the same group. Biologically functional equivalents of the proteins or fragments thereof of the present invention can have 10 or fewer conservative amino acid changes, more preferably seven or fewer conservative amino acid changes, and most preferably five or fewer conservative amino acid changes. The encoding nucleotide sequence will thus have corresponding base substitutions, permitting it to encode biologically functional equivalent forms of the proteins or fragments of the present invention.

It is understood that certain amino acids may be substituted for other amino acids in a protein structure without appreciable loss of interactive binding capacity with structures such as, for example, antigen-binding regions of antibodies or binding sites on substrate molecules. Because it is the interactive capacity and nature of a protein that defines that protein's biological functional activity, certain amino acid sequence substitutions can be made in a protein sequence and, of course, its underlying DNA coding sequence and, nevertheless, obtain a protein with like properties. It is thus contemplated by the inventors that various changes may be made in the peptide sequences of the proteins or fragments of the present invention, or corresponding DNA sequences that encode said peptides, without appreciable loss of their biological utility or activity. It is understood that codons capable of coding for such amino acid changes are known in the art.

In making such changes, the hydropathic index of amino acids may be considered. The importance of the hydropathic amino acid index in conferring interactive biological function on a protein is generally understood in the art (Kyte and Doolittle, *J. Mol. Biol.* 157, 105-132 (1982), herein incorporated by reference in its entirety). It is accepted that the relative hydropathic character of the amino acid contributes to the secondary structure of the resultant protein, which in turn defines the interaction of the protein with other molecules, for example, enzymes, substrates, receptors, DNA, antibodies, antigens, and the like.

Each amino acid has been assigned a hydropathic index on the basis of its hydrophobicity and charge characteristics (Kyte and Doolittle, 1982); these are isoleucine (+4.5), valine (+4.2), leucine (+3.8), phenylalanine (+2.8), cysteine/cystine (+2.5), methionine (+1.9), alanine (+1.8), glycine (-0.4), threonine (-0.7), serine (-0.8), tryptophan (-0.9), tyrosine (-1.3), proline (-1.6), histidine (-3.2), glutamate (-3.5), glutamine (-3.5), aspartate (-3.5), asparagine (-3.5), lysine (-3.9), and arginine (-4.5).

In making such changes, the substitution of amino acids whose hydropathic indices are within ± 2 is preferred, those which are within ± 1 are particularly preferred, and those within ± 0.5 are even more particularly preferred.

It is also understood in the art that the substitution of like amino acids can be made effectively on the basis of hydrophilicity. U.S. Patent 4,554,101, incorporated herein by reference in its entirety, states that the greatest local average hydrophilicity of a protein, as govern by the hydrophilicity of its adjacent amino acids, correlates with a biological property of the protein.

As detailed in U.S. Patent 4,554,101, the following hydrophilicity values have been assigned to amino acid residues: arginine (+3.0), lysine (+3.0), aspartate (+3.0 \pm 1), glutamate (+3.0 \pm 1), serine (+0.3), asparagine (+0.2), glutamine (+0.2), glycine (0), threonine (-0.4), proline (-0.5 \pm 1), alanine (-0.5), histidine (-0.5), cysteine (-1.0), methionine (-1.3), valine (-1.5), leucine (-1.8), isoleucine (-1.8), tyrosine (-2.3), phenylalanine (-2.5), and tryptophan (-3.4). In making such changes, the substitution of amino acids whose hydrophilicity values are within ± 2 is preferred, those which are within ± 1 are particularly preferred, and those within ± 0.5 are even more particularly preferred.

In a further aspect of the present invention, one or more of the nucleic acid molecules of the present invention differ in nucleic acid sequence from those encoding a protein or fragment thereof set forth in SEQ ID NO: 1 through SEQ ID NO: 57264 or fragment thereof due to the fact that one or more codons encoding an amino acid has been substituted for a codon that encodes a nonessential substitution of the amino acid originally encoded.

One aspect of the present invention concerns markers that include nucleic acid molecules SEQ ID NO: 1 through SEQ ID NO: 57264 or complements thereof or fragments of either that can act as markers or other nucleic acid molecules of the present invention that can act as markers. Genetic markers of the present invention include

“dominant” or “codominant” markers “Codominant markers” reveal the presence of two or more alleles (two per diploid individual) at a locus. “Dominant markers” reveal the presence of only a single allele per locus. The presence of the dominant marker phenotype (e.g., a band of DNA) is an indication that one allele is present in either the homozygous or heterozygous condition. The absence of the dominant marker phenotype (e.g. absence of a DNA band) is merely evidence that “some other” undefined allele is present. In the case of populations where individuals are predominantly homozygous and loci are predominately dimorphic, dominant and codominant markers can be equally valuable. As populations become more heterozygous and multi-allelic, codominant markers often become more informative of the genotype than dominant markers. Marker molecules can be, for example, capable of detecting polymorphisms such as single nucleotide polymorphisms (SNPs).

SNPs are single base changes in genomic DNA sequence. They occur at greater frequency and are spaced with a greater uniformity throughout a genome than other reported forms of polymorphism. The greater frequency and uniformity of SNPs means that there is greater probability that such a polymorphism will be found near or in a genetic locus of interest than would be the case for other polymorphisms. SNPs are located in protein-coding regions and noncoding regions of a genome. Some of these SNPs may result in defective or variant protein expression (e.g., as a results of mutations or defective splicing). Analysis (genotyping) of characterized SNPs can require only a plus/minus assay rather than a lengthy measurement, permitting easier automation.

SNPs can be characterized using any of a variety of methods. Such methods include the direct or indirect sequencing of the site, the use of restriction enzymes (Botstein *et al.*, *Am. J. Hum. Genet.* 32:314-331 (1980), the entirety of which is herein incorporated reference; Konieczny and Ausubel, *Plant J.* 4:403-410 (1993), the entirety of which is herein incorporated by reference), enzymatic and chemical mismatch assays (Myers *et al.*, *Nature* 313:495-498 (1985), the entirety of which is herein incorporated by

reference), allele-specific PCR (Newton *et al.*, *Nucl. Acids Res.* 17:2503-2516 (1989), the entirety of which is herein incorporated by reference; Wu *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:2757-2760 (1989), the entirety of which is herein incorporated by reference), ligase chain reaction (Barany, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:189-193 (1991), the entirety of which is herein incorporated by reference), single-strand conformation polymorphism analysis (Labruno *et al.*, *Am. J. Hum. Genet.* 48: 1115-1120 (1991), the entirety of which is herein incorporated by reference), primer-directed nucleotide incorporation assays (Kuppuswami *et al.*, *Proc. Natl. Acad. Sci. USA* 88:1143-1147 (1991), the entirety of which is herein incorporated by reference), dideoxy fingerprinting (Sarkar *et al.*, *Genomics* 13:441-443 (1992), the entirety of which is herein incorporated by reference), solid-phase ELISA-based oligonucleotide ligation assays (Nikiforov *et al.*, *Nucl. Acids Res.* 22:4167-4175 (1994), the entirety of which is herein incorporated by reference), oligonucleotide fluorescence-quenching assays (Livak *et al.*, *PCR Methods Appl.* 4:357-362 (1995), the entirety of which is herein incorporated by reference), 5'-nuclease allele-specific hybridization TaqMan assay (Livak *et al.*, *Nature Genet.* 9:341-342 (1995), the entirety of which is herein incorporated by reference), template-directed dye-terminator incorporation (TDI) assay (Chen and Kwok, *Nucl. Acids Res.* 25:347-353 (1997), the entirety of which is herein incorporated by reference), allele-specific molecular beacon assay (Tyagi *et al.*, *Nature Biotech.* 16: 49-53 (1998), the entirety of which is herein incorporated by reference), PinPoint assay (Haff and Smirnov, *Genome Res.* 7: 378-388 (1997), the entirety of which is herein incorporated by reference) and dCAPS analysis (Neff *et al.*, *Plant J.* 14:387-392 (1998), the entirety of which is herein incorporated by reference).

Additional markers, such as AFLP markers, RFLP markers and RAPD markers, can be utilized (Walton, *Seed World* 22-29 (July, 1993), the entirety of which is herein incorporated by reference; Burow and Blake, *Molecular Dissection of Complex Traits*, 13-29, Paterson (ed.), CRC Press, New York (1988), the entirety of which is herein

incorporated by reference). DNA markers can be developed from nucleic acid molecules using restriction endonucleases, the PCR and/or DNA sequence information. RFLP markers result from single base changes or insertions/deletions. These codominant markers are highly abundant in plant genomes, have a medium level of polymorphism and are developed by a combination of restriction endonuclease digestion and Southern blotting hybridization. CAPS are similarly developed from restriction nuclease digestion but only of specific PCR products. These markers are also codominant, have a medium level of polymorphism and are highly abundant in the genome. The CAPS result from single base changes and insertions/deletions.

Another marker type, RAPDs, are developed from DNA amplification with random primers and result from single base changes and insertions/deletions in plant genomes. They are dominant markers with a medium level of polymorphisms and are highly abundant. AFLP markers require using the PCR on a subset of restriction fragments from extended adapter primers. These markers are both dominant and codominant are highly abundant in genomes and exhibit a medium level of polymorphism.

SSRs require DNA sequence information. These codominant markers result from repeat length changes, are highly polymorphic and do not exhibit as high a degree of abundance in the genome as CAPS, AFLPs and RAPDs, SNPs also require DNA sequence information. These codominant markers result from single base substitutions. They are highly abundant and exhibit a medium of polymorphism (Rafalski *et al.*, In: *Nonmammalian Genomic Analysis*, Birren and Lai (ed.), Academic Press, San Diego, CA, pp. 75-134 (1996), the entirety of which is herein incorporated by reference). It is understood that a nucleic acid molecule of the present invention may be used as a marker.

A PCR probe is a nucleic acid molecule capable of initiating a polymerase activity while in a double-stranded structure with another nucleic acid. Various methods for determining the structure of PCR probes and PCR techniques exist in the art. Computer

generated searches using programs such as Primer3 (www-genome.wi.mit.edu/cgi-bin/primer/primer3.cgi), STSPipeline (www-genome.wi.mit.edu/cgi-bin/www-STSPipeline), or GeneUp (Pesole *et al.*, *BioTechniques* 25:112-123 (1998) the entirety of which is herein incorporated by reference), for example, can be used to identify
 5 potential PCR primers.

It is understood that a fragment of one or more of the nucleic acid molecules of the present invention may be a probe and specifically a PCR probe.

(b) **Protein and Peptide Molecules**

A class of agents comprises one or more of the protein or peptide molecules
 10 encoded by SEQ ID NO: 1 through SEQ ID NO:57264 or one or more of the protein or fragment thereof or peptide molecules encoded by other nucleic acid agents of the present invention. As used herein, the term "protein molecule" or "peptide molecule" includes any molecule that comprises five or more amino acids. It is well know in the art that proteins may undergo modification, including post-translational modifications, such as,
 15 but not limited to, disulfide bond formation, glycosylation, phosphorylation, or oligomerization. Thus, as used herein, the term "protein molecule" or "peptide molecule" includes any protein molecule that is modified by any biological or non-biological process. The terms "amino acid" and "amino acids" refer to all naturally occurring L-amino acids. This definition is meant to include norleucine, ornithine, homocysteine, and
 20 homoserine.

One or more of the protein or fragment of peptide molecules may be produced via chemical synthesis, or more preferably, by expression in a suitable bacterial or eukaryotic host. Suitable methods for expression are described by Sambrook, *et al.*, (In: *Molecular Cloning, A Laboratory Manual, 2nd Edition, Cold Spring Harbor Press, Cold Spring*
 25 Harbor, New York (1989)), or similar texts.

A "protein fragment" is a peptide or polypeptide molecule whose amino acid sequence comprises a subset of the amino acid sequence of that protein. A protein or

fragment thereof that comprises one or more additional peptide regions not derived from that protein is a "fusion" protein. Such molecules may be derivatized to contain carbohydrate or other moieties (such as keyhole limpet hemocyanin, etc.). Fusion protein or peptide molecule of the present invention are preferably produced via recombinant means.

Another class of agents comprise protein or peptide molecules encoded by SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof or, fragments or fusions thereof in which non-essential, or not relevant, amino acid residues have been added, replaced, or deleted. An example of such a homologue is the homologue protein of all non-maize plant species, including but not limited to alfalfa, *Arabidopsis*, barley, *Brassica*, broccoli, cabbage, citrus, cotton, garlic, oat, oilseed rape, onion, canola, flax, an ornamental plant, pea, peanut, pepper, potato, rice, rye, sorghum, soybean, strawberry, sugarcane, sugarbeet, tomato, wheat, poplar, pine, fir, eukalyptus, apple, lettuce, peas, lentils, grape, banana, tea, turf grasses, etc. Particularly preferred non-maize plants to utilize for the isolation of homologues would include alfalfa, *Arabidopsis*, barley, cotton, oat, oilseed rape, rice, canola, ornamentals, soybean, sugarcane, sugarbeet, tomato, potato, wheat, and turf grasses. Such a homologue can be obtained by any of a variety of methods. Most preferably, as indicated above, one or more of the disclosed sequences (SEQ ID NO: 1 through SEQ ID NO:57264 or complements thereof) will be used to define a pair of primers that may be used to isolate the homologue-encoding nucleic acid molecules from any desired species. Such molecules can be expressed to yield homologues by recombinant means.

(c) Antibodies

One aspect of the present invention concerns antibodies, single-chain antigen binding molecules, or other proteins that specifically bind to one or more of the protein or peptide molecules of the present invention and their homologues, fusions or fragments. Such antibodies may be used to quantitatively or qualitatively detect the protein or

peptide molecules of the present invention. As used herein, an antibody or peptide is said to “specifically bind” to a protein or peptide molecule of the present invention if such binding is not competitively inhibited by the presence of non-related molecules.

Nucleic acid molecules that encode all or part of the protein of the present invention can be expressed, via recombinant means, to yield protein or peptides that can in turn be used to elicit antibodies that are capable of binding the expressed protein or peptide. Such antibodies may be used in immunoassays for that protein. Such protein-encoding molecules, or their fragments may be a “fusion” molecule (i.e., a part of a larger nucleic acid molecule) such that, upon expression, a fusion protein is produced. It is understood that any of the nucleic acid molecules of the present invention may be expressed, via recombinant means, to yield proteins or peptides encoded by these nucleic acid molecules.

The antibodies that specifically bind proteins and protein fragments of the present invention may be polyclonal or monoclonal, and may comprise intact immunoglobulins, or antigen binding portions of immunoglobulins (such as $F(ab')$, $F(ab')_2$) fragments, or single-chain immunoglobulins producible, for example, via recombinant means). It is understood that practitioners are familiar with the standard resource materials which describe specific conditions and procedures for the construction, manipulation and isolation of antibodies (see, for example, Harlow and Lane, In *Antibodies: A Laboratory Manual*, Cold Spring Harbor Press, Cold Spring Harbor, New York (1988), the entirety of which is herein incorporated by reference).

Murine monoclonal antibodies are particularly preferred. BALB/c mice are preferred for this purpose, however, equivalent strains may also be used. The animals are preferably immunized with approximately 25 μ g of purified protein (or fragment thereof) that has been emulsified a suitable adjuvant (such as TiterMax adjuvant (Vaxcel, Norcross, GA)). Immunization is preferably conducted at two intramuscular sites, one intraperitoneal site, and one subcutaneous site at the base of the tail. An additional i.v.

injection of approximately 25 μ g of antigen is preferably given in normal saline three weeks later. After approximately 11 days following the second injection, the mice may be bled and the blood screened for the presence of anti-protein or peptide antibodies. Preferably, a direct binding Enzyme-Linked Immunoassay (ELISA) is employed for this purpose.

More preferably, the mouse having the highest antibody titer is given a third i.v. injection of approximately 25 μ g of the same protein or fragment. The splenic leukocytes from this animal may be recovered 3 days later, and are then permitted to fuse, most preferably, using polyethylene glycol, with cells of a suitable myeloma cell line (such as, for example, the P3X63Ag8.653 myeloma cell line). Hybridoma cells are selected by culturing the cells under "HAT" (hypoxanthine-aminopterin-thymine) selection for about one week. The resulting clones may then be screened for their capacity to produce monoclonal antibodies ("mAbs), preferably by direct ELISA.

In one embodiment, anti-protein or peptide monoclonal antibodies are isolated using a fusion of a protein, protein fragment, or peptide of the present invention, or conjugate of a protein, protein fragment, or peptide of the present invention, as immunogens. Thus, for example, a group of mice can be immunized using a fusion protein emulsified in Freund's complete adjuvant (e.g. approximately 50 μ g of antigen per immunization). At three week intervals, an identical amount of antigen is emulsified in Freund's incomplete adjuvant and used to immunize the animals. Ten days following the third immunization, serum samples are taken and evaluated for the presence of antibody. If antibody titers are too low, a fourth booster can be employed. Polysera capable of binding the protein or peptide can also be obtained using this method.

In a preferred procedure for obtaining monoclonal antibodies, the spleens of the above-described immunized mice are removed, disrupted, and immune splenocytes are isolated over a ficoll gradient. The isolated splenocytes are fused, using polyethylene glycol with BALB/c-derived HGPRT (hypoxanthine guanine phosphoribosyl transferase)

deficient P3x63xAg8.653 plasmacytoma cells. The fused cells are plated into 96-well microtiter plates and screened for hybridoma fusion cells by their capacity to grow in culture medium supplemented with hypoxanthine, aminopterin and thymidine for approximately 2-3 weeks.

- 5 Hybridoma cells that arise from such incubation are preferably screened for their capacity to produce an immunoglobulin that binds to a protein of interest. An indirect ELISA may be used for this purpose. In brief, the supernatants of hybridomas are incubated in microtiter wells that contain immobilized protein. After washing, the titer of bound immunoglobulin can be determined using, for example, a goat anti-mouse
- 10 antibody conjugated to horseradish peroxidase. After additional washing, the amount of immobilized enzyme is determined (for example through the use of a chromogenic substrate). Such screening is performed as quickly as possible after the identification of the hybridoma in order to ensure that a desired clone is not overgrown by non-secreting neighbors. Desirably, the fusion plates are screened several times since the rates of
- 15 hybridoma growth vary. In a preferred embodiment, a different antigenic form of immunogen may be used to screen the hybridoma. Thus, for example, the splenocytes may be immunized with one immunogen, but the resulting hybridomas can be screened using a different immunogen. It is understood that any of the protein or peptide molecules of the present invention may be used to raise antibodies.

- 20 As discussed below, such antibody molecules or their fragments may be used for diagnostic purposes. Where the antibodies are intended for diagnostic purposes, it may be desirable to derivatize them, for example with a ligand group (such as biotin) or a detectable marker group (such as a fluorescent group, a radioisotope or an enzyme).

- 25 The ability to produce antibodies that bind the protein or peptide molecules of the present invention permits the identification of mimetic compounds of those molecules. A "mimetic compound" is a compound that is not that compound, or a fragment of that

compound, but which nonetheless exhibits an ability to specifically bind to antibodies directed against that compound.

It is understood that any of the agents of the present invention can be substantially purified and/or be biologically active and/or recombinant.

5 **Uses of the Agents of the Invention**

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB143, prepared from *Zea mays* heat shocked seedlings two days post germination. Seedlings are a developmental phase in the growth process therefore, the ESTs of the present invention will find great use in the isolation of
10 a variety of agronomically significant genes, including but not limited to genes that regulate germination, developmental stress, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, trypsin inhibitors, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism, and seedling and vegetative regulatory elements. Such crucial genes are associated with plant growth, quality, yield, and could also serve as
15 links in important metabolic, developmental and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB148, prepared from *Zea mays*, genotype DK604 mature pollen. ESTs from this tissue sample can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of
20 commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes involved in reproduction and seed production, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate meiosis, cell division, carotenoids, floral biogenesis, embryogenesis, protein,
25 amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements.

Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB189, prepared from *Zea mays* pooled leaf tissue harvested from field grown plants. Leaves are the carbohydrate factories of crop plants, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to genes that are necessary to for the interception and transformation of light energy via photosynthesis linked with plant growth, quality and yield. Genes isolated using the disclosed ESTs would also be in pathways including but not limited to a pathway such as nitrogen metabolism linked to fruiting and mobilization and distribution of nitrogen.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3059, prepared from *Zea mays*, genotype RX601, kernel tissue harvested 15-20 days after pollination from field grown plants. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3060, prepared from the tissue of *Zea mays* senescing leaves, which are collected at the position of two leaves below the ear leaf of mature corn plants at 40 days after pollination. The ESTs of the present invention can enable the acquisition of genes expressed during onset and early stages of leaf senescence. The ESTs of the present invention can also be used in isolating genes which

would be involved in pathways, including but not limited to, of light and dark respiration, of CO₂ assimilation, and of nitrogen metabolism linked to fruiting and mobilization and distribution of nitrogen. Leaves are the main photosynthetic organs of crop plants, therefore, the ESTs of the present invention will find great use in the isolation of a variety

5 of agronomically significant genes, including but not limited to, genes that regulate photosynthesis and respiration. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of

10 commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3062, prepared from *Zea mays* genotype H99 husk tissue harvested at the eight week old stage from plants grown in a green house. Husks have similar characteristics of leaves which are the carbohydrate factories of crop plants,

15 therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to genes that are necessary to for the interception and transformation of light energy via photosynthesis linked with plant growth, quality and yield. Genes isolated using the disclosed ESTs would also be in pathways including but not limited to a pathway such as nitrogen metabolism linked to

20 fruiting and mobilization and distribution of nitrogen.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3066, prepared from *Zea mays*, genotype H99 (Monsanto Corp. St. Louis, MO), immature anthers. The ESTs of the present invention can enable the acquisition of, but are not limited to genes involved in reproduction, pollen

25 production and development, and seed production, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate microsporogenesis, meiosis, cell

division, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3067, prepared from *Zea mays*, genotype M017, kernel tissue harvested 5-8 days after pollination from plants grown in a green house. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, early kernel development, cell division, amyloplast biogenesis, early carbon flow across material to filial tissue, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3068, prepared from *Zea mays*, genotype MO17 pollen germinating on H99 silk tissue. This sample represents genes expressed in both pollen and silk tissues earlier in pollination and can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes involved in reproduction and seed production, therefore, the ESTs of the present invention will find great use in the isolation

of a variety of agronomically significant genes, including but not limited to, genes that regulate meiosis, cell division, carotenoids, floral biogenesis, embryogenesis, protein, amino acids, sterols, oils, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements.

- 5 Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3069, prepared from *Zea mays*, genotype H99 (Monsanto Corp., St. Louis, MO), ears pollinated with an excess of genotype MO17 (Illinois Foundation Seeds, Champaign, IL) pollen and harvested from 18 hours after pollination plants. The ESTs of the present invention can enable the acquisition of, including but not limited to genes expressed early in fertilization and those involved in reproduction and seed development, therefore, the ESTs of the present invention will find great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate cell division, floral biogenesis, embryogenesis, protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3075, prepared from maize, genotype H99, microspore tissue. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, but are not limited to genes involved in reproduction, meiosis, and cell

division. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3076, prepared from *Zea mays* kernels from
 5 immature ear tissue harvested from seven week old plants grown in a green house. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones,
 10 saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

The nucleic acid molecules and fragments thereof of the present invention are
 15 generated from the cDNA library, LIB3078, prepared from *Zea mays*, genotype RX601 (Asgrow, Des Moines, IA), shoots harvested at 10 days after planting from plants which are grown in a greenhouse in a high CO₂ environment (~1000 ppm CO₂). The ESTs of the present invention can enable the acquisition of, but are not limited to genes involved in photosynthesis and respiration, therefore, the ESTs of the present invention will find
 20 great use in the isolation of a variety of agronomically significant genes, including but not limited to, genes that regulate light and dark respiration, CO₂ assimilation, photosynthesis, developmental stress, proteins, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, and starch metabolism. Such genes are associated with plant growth, quality and yield, and
 25 could also serve as links in important developmental, metabolic, and catabolic pathways. Libraries from this tissue can enable the acquisition of a variety of agronomically

significant genes involved in the synthesis and catabolism of commercially important traits.

The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3079, prepared from *Zea mays* dissected kernel
5 tissue including the lower endosperm and the basal endosperm transfer region. This tissue was harvested from plants beyond the V10 stage grown under greenhouse conditions. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important traits. The ESTs of the present invention can enable the
10 acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic, and catabolic pathways.

15 The nucleic acid molecules and fragments thereof of the present invention are generated from the cDNA library, LIB3088, prepared from *Zea mays* kernels from immature ear tissue harvested from eight week old plants grown in a green house. Libraries from this tissue can enable the acquisition of a variety of agronomically significant genes involved in the synthesis and catabolism of commercially important
20 traits. The ESTs of the present invention can enable the acquisition of, including but not limited to genes that regulate protein, oils, amino acids, sterols, minerals, isoflavones, saponins, vitamins, tocopherols, antinutrient components, carbohydrates, starch metabolism and seed regulatory elements. Such genes are associated with plant growth, quality and yield, and could also serve as links in important developmental, metabolic,
25 and catabolic pathways.

Nucleic acid molecules and fragments thereof of the present invention may be employed to obtain other nucleic acid molecules. Such molecules include the nucleic acid molecules of other plants or other organisms (*e.g.*, alfalfa, rice, potato, cotton, oat, rye, barley, maize, wheat, *Arabidopsis*, *Brassica*, etc.) including the nucleic acid

5 molecules that encode, in whole or in part, protein homologues of other plant species or other organisms, and sequences of genetic elements such as promoters and transcriptional regulatory elements. Such molecules can be readily obtained by using the above-described nucleic acid molecules or fragments thereof to screen cDNA or genomic libraries obtained from such plant species. Methods for forming such libraries are well

10 known in the art. Such homologue molecules may differ in their nucleotide sequences from those found in one or more of SEQ ID NO:1 through SEQ ID NO:57264 or complements thereof because complete complementarity is not needed for stable hybridization. The nucleic acid molecules of the present invention therefore also include molecules that, although capable of specifically hybridizing with the nucleic acid

15 molecules may lack "complete complementarity."

Any of a variety of methods may be used to obtain one or more of the above-described nucleic acid molecules (Zamechik *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 83:4143-4146 (1986), the entirety of which is herein incorporated by reference; Goodchild *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:5507-5511 (1988), the entirety of

20 which is herein incorporated by reference; Wickstrom *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:1028-1032 (1988), the entirety of which is herein incorporated by reference; Holt, *et al.*, *Molec. Cell. Biol.* 8:963-973 (1988), the entirety of which is herein incorporated by reference; Gerwitz, *et al.*, *Science* 242:1303-1306 (1988), the entirety of which is herein incorporated by reference; Anfossi, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*

25 86:3379-3383 (1989), the entirety of which is herein incorporated by reference; Becker, *et al.*, *EMBO J.* 8:3685-3691 (1989); the entirety of which is herein incorporated by reference). Automated nucleic acid synthesizers may be employed for this purpose. In

lieu of such synthesis, the disclosed nucleic acid molecules may be used to define a pair of primers that can be used with the polymerase chain reaction (Mullis, *et al.*, *Cold Spring Harbor Symp. Quant. Biol.* 51:263-273 (1986); Erlich *et al.*, EP 50,424; EP 84,796, EP 258,017, EP 237,362; Mullis, EP 201,184; Mullis *et al.*, US 4,683,202;

5 Erlich, US 4,582,788; and Saiki, R. *et al.*, US 4,683,194, all of which are hereby incorporated by reference in their entirety) to amplify and obtain any desired nucleic acid molecule or fragment.

Promoter sequence(s) and other genetic elements including but not limited to transcriptional regulatory elements associated with one or more of the disclosed nucleic acid sequences can also be obtained using the disclosed nucleic acid sequences provided
10 herein.

In one embodiment, such sequences are obtained by incubating EST nucleic acid molecules or preferably fragments thereof with members of genomic libraries (*e.g.* maize and soybean) and recovering clones that hybridize to the EST nucleic acid molecule or
15 fragment thereof. In a second embodiment, methods of "chromosome walking," or inverse PCR may be used to obtain such sequences (Frohman, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 85:8998-9002 (1988); Ohara, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86: 5673-5677 (1989); Pang *et al.*, *Biotechniques*, 22(6); 1046-1048 (1977); Huang *et al.*, *Methods Mol. Biol.* 69: 89-96 (1977); Hartl *et al.*, *Methods Mol. Biol.* 58: 293-301
20 (1996), all of which are hereby incorporated by reference in their entirety). In one embodiment, the disclosed nucleic acid molecules are used to identify cDNAs whose analogous genes contain promoters with desirable expression patterns. The nucleic acid molecules isolated from the library of the present invention are used to isolate promoters of tissue-enhanced, tissue-specific, developmentally- or environmentally-regulated
25 expression profiles. Isolation and functional analysis of the 5' flanking promoter sequences of these genes from genomic libraries, for example, using genomic screening methods and PCR techniques would result in the isolation of useful promoters and

transcriptional regulatory elements. These methods are known to those of skill in the art and have been described (See for example Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, (1997), Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., the entirety of which is herein incorporated by reference).

5 Promoters obtained utilizing the nucleic acid molecules of the present invention could also be modified to affect their control characteristics. Examples of such modifications would include but are not limited to enhancer sequences as reported by Kay *et al.*, *Science* 236:1299 (1987), herein incorporated by reference in its entirety. Such genetic elements could be used to enhance gene expression of new and existing

10 traits for crop improvements.

The nucleic acid molecules of the present invention may be used to isolate promoters of tissue enhanced. tissue specific, cell-specific, cell -type, developmentally or environmentally regulated expression profiles. Isolation and functional analysis of the 5' flanking promoter sequences of these genes from genomic libraries, for example, using

15 genomic screening methods and PCR techniques would result in the isolation of useful promoters and transcriptional regulatory elements. These methods are known to those of skill in the art and have been described (See, for example, Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y. (1997), the entirety of which is herein incorporated by reference). Promoters

20 obtained utilizing the nucleic acid molecules of the present invention could also be modified to affect their control characteristics. Examples of such modifications would include but are not limited to enhancer sequences as reported by Kay, *et al Science* 236:1299 (1987), herein incorporated reference in its entirety. Such genetic elements could be used to enhance gene expression of new and existing traits for crop

25 improvements.

In an aspect of the present invention, one or more of the nucleic molecules of the present invention are used to determine whether a plant (preferably maize) has a mutation

affecting the level (i.e., the concentration of mRNA in a sample, etc.) or pattern (i.e., the kinetics of expression, rate of decomposition, stability profile, etc.) of the expression encoded in part or whole by one or more of the nucleic acid molecules of the present invention (collectively, the “Expression Response” of a cell or tissue). As used herein,

5 the Expression Response manifested by a cell or tissue is said to be “altered” if it differs from the Expression Response of cells or tissues of plants not exhibiting the phenotype. To determine whether a Expression Response is altered, the Expression Response manifested by the cell or tissue of the plant exhibiting the phenotype is compared with that of a similar cell or tissue sample of a plant not exhibiting the phenotype. As will be

10 appreciated, it is not necessary to re-determine the Expression Response of the cell or tissue sample of plants not exhibiting the phenotype each time such a comparison is made; rather, the Expression Response of a particular plant may be compared with previously obtained values of normal plants. As used herein, the phenotype of the organism is any of one or more characteristics of an organism (e.g. disease resistance,

15 pest tolerance, environmental tolerance, male sterility, yield, quality improvements, etc.). A change in genotype or phenotype may be transient or permanent. Also as used herein, a tissue sample is any sample that comprises more than one cell. In a preferred aspect, a tissue sample comprises cells that share a common characteristic (e.g. derived from leaf, root, or pollen etc).

20 In one sub-aspect, such an analysis is conducted by determining the presence and/or identity of polymorphism(s) by one or more of the nucleic acid molecules of the present invention and more specifically, one or more of the EST nucleic acid molecules or fragments thereof which are associated with phenotype, or a predisposition to phenotype.

25 Any of a variety of molecules can be used to identify such polymorphism(s). In one embodiment, one or more of the EST nucleic acid molecules (or a sub-fragment thereof) may be employed as a marker nucleic acid molecule to identify such

polymorphism(s). Alternatively, such polymorphisms can be detected through the use of a marker nucleic acid molecule or a marker protein that is genetically linked to (i.e., a polynucleotide that co-segregates with) such polymorphism(s).

In an alternative embodiment, such polymorphisms can be detected through the use of a marker nucleic acid molecule that is physically linked to such polymorphism(s). For this purpose, marker nucleic acid molecules comprising a nucleotide sequence of a polynucleotide located within 1 mb of the polymorphism(s), and more preferably within 100 kb of the polymorphism(s), and most preferably within 10 kb of the polymorphism(s) can be employed.

The genomes of animals and plants naturally undergo spontaneous mutation in the course of their continuing evolution (Gusella, *Ann. Rev. Biochem.* 55:831-854 (1986)). A “polymorphism” is a variation or difference in the sequence of the gene or its flanking regions that arises in some of the members of a species. The variant sequence and the “original” sequence co-exist in the species’ population. In some instances, such co-existence is in stable or quasi-stable equilibrium.

A polymorphism is thus said to be “allelic,” in that, due to the existence of the polymorphism, some members of a species may have the original sequence (i.e., the original “allele”) whereas other members may have the variant sequence (i.e., the variant “allele”). In the simplest case, only one variant sequence may exist, and the polymorphism is thus said to be di-allelic. In other cases, the species’ population may contain multiple alleles, and the polymorphism is termed tri-allelic, etc. A single gene may have multiple different unrelated polymorphisms. For example, it may have a di-allelic polymorphism at one site, and a multi-allelic polymorphism at another site.

The variation that defines the polymorphism may range from a single nucleotide variation to the insertion or deletion of extended regions within a gene. In some cases, the DNA sequence variations are in regions of the genome that are characterized by short tandem repeats (STRs) that include tandem di- or tri-nucleotide repeated motifs of

nucleotides. Polymorphisms characterized by such tandem repeats are referred to as "variable number tandem repeat" ("VNTR") polymorphisms. VNTRs have been used in identity analysis (Weber, U.S. Patent 5,075,217; Armour, *et al.*, *FEBS Lett.* 307:113-115 (1992); Jones, *et al.*, *Eur. J. Haematol.* 39:144-147 (1987); Horn, *et al.*, PCT Application WO91/14003; Jeffreys, European Patent Application 370,719; Jeffreys, U.S. Patent 5,699,082; Jeffreys, *et al.*, *Amer. J. Hum. Genet.* 39:11-24 (1986); Jeffreys, *et al.*, *Nature* 316:76-79 (1985); Gray, *et al.*, *Proc. R. Acad. Soc. Lond.* 243:241-253 (1991); Moore, *et al.*, *Genomics* 10:654-660 (1991); Jeffreys, *et al.*, *Anim. Genet.* 18:1-15 (1987); Hillel, *et al.*, *Anim. Genet.* 20:145-155 (1989); Hillel, *et al.*, *Genet.* 124:783-789 (1990), all of which are herein incorporated by reference in their entirety).

The detection of polymorphic sites in a sample of DNA may be facilitated through the use of nucleic acid amplification methods. Such methods specifically increase the concentration of polynucleotides that span the polymorphic site, or include that site and sequences located either distal or proximal to it. Such amplified molecules can be readily detected by gel electrophoresis or other means.

The most preferred method of achieving such amplification employs the polymerase chain reaction ("PCR") (Mullis, *et al.*, *Cold Spring Harbor Symp. Quant. Biol.* 51:263-273 (1986); Erlich, *et al.*, European Patent Appln. 50,424; European Patent Appln. 84,796, European Patent Application 258,017, European Patent Appln. 237,362; Mullis, European Patent Appln. 201,184; Mullis, *et al.*, U.S. Patent No. 4,683,202; Erlich, U.S. Patent No. 4,582,788; and Saiki, *et al.*, U.S. Patent No. 4,683,194, all of which are herein incorporated by reference), using primer pairs that are capable of hybridizing to the proximal sequences that define a polymorphism in its double-stranded form.

In lieu of PCR, alternative methods, such as the "Ligase Chain Reaction" ("LCR") may be used (Barany, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:189-193 (1991), the entirety of which is herein incorporated by reference). LCR uses two pairs of oligonucleotide probes

to exponentially amplify a specific target. The sequences of each pair of oligonucleotides is selected to permit the pair to hybridize to abutting sequences of the same strand of the target. Such hybridization forms a substrate for a template-dependent ligase. As with PCR, the resulting products thus serve as a template in subsequent cycles and an

5 exponential amplification of the desired sequence is obtained.

LCR can be performed with oligonucleotides having the proximal and distal sequences of the same strand of a polymorphic site. In one embodiment, either oligonucleotide will be designed to include the actual polymorphic site of the polymorphism. In such an embodiment, the reaction conditions are selected such that the

10 oligonucleotides can be ligated together only if the target molecule either contains or lacks the specific nucleotide that is complementary to the polymorphic site present on the oligonucleotide. Alternatively, the oligonucleotides may be selected such that they do not include the polymorphic site (see, Segev, PCT Application WO 90/01069, the entirety of which is herein incorporated by reference).

15 The "Oligonucleotide Ligation Assay" ("OLA") may alternatively be employed (Landegren, *et al.*, *Science* 241:1077-1080 (1988), the entirety of which is herein incorporated by reference). The OLA protocol uses two oligonucleotides which are designed to be capable of hybridizing to abutting sequences of a single strand of a target. OLA, like LCR, is particularly suited for the detection of point mutations. Unlike LCR,

20 however, OLA results in "linear" rather than exponential amplification of the target sequence.

Nickerson, *et al.* have described a nucleic acid detection assay that combines attributes of PCR and OLA (Nickerson, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:8923-8927 (1990), the entirety of which is herein incorporated by reference). In this method,

25 PCR is used to achieve the exponential amplification of target DNA, which is then detected using OLA. In addition to requiring multiple, and separate, processing steps,

one problem associated with such combinations is that they inherit all of the problems associated with PCR and OLA.

Schemes based on ligation of two (or more) oligonucleotides in the presence of nucleic acid having the sequence of the resulting "di-oligonucleotide", thereby amplifying
 5 the di-oligonucleotide, are also known (Wu, *et al.*, *Genomics* 4:560 (1989), the entirety of which is herein incorporated by reference), and may be readily adapted to the purposes of the present invention.

Other known nucleic acid amplification procedures, such as allele-specific oligomers, branched DNA technology, transcription-based amplification systems, or
 10 isothermal amplification methods may also be used to amplify and analyze such polymorphisms (Malek, *et al.*, U.S. Patent 5,130,238; Davey, *et al.*, European Patent Application 329,822; Schuster *et al.*, U.S. Patent 5,169,766; Miller, *et al.*, PCT Application WO 89/06700; Kwoh, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:1173-1177 (1989); Gingeras, *et al.*, PCT Application WO 88/10315; Walker, *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:392-396 (1992), all of which are herein incorporated by reference in their
 15 entirety).

The identification of a polymorphism can be determined in a variety of ways. By correlating the presence or absence of it in a plant with the presence or absence of a phenotype, it is possible to predict the phenotype of that plant. If a polymorphism creates
 20 or destroys a restriction endonuclease cleavage site, or if it results in the loss or insertion of DNA (e.g., a VNTR polymorphism), it will alter the size or profile of the DNA fragments that are generated by digestion with that restriction endonuclease. As such, individuals that possess a variant sequence can be distinguished from those having the original sequence by restriction fragment analysis. Polymorphisms that can be identified
 25 in this manner are termed "restriction fragment length polymorphisms" ("RFLPs"). RFLPs have been widely used in human and plant genetic analyses (Glassberg, UK Patent Application 2135774; Skolnick, *et al.*, *Cytogen. Cell Genet.* 32:58-67 (1982);

Botstein, *et al.*, *Ann. J. Hum. Genet.* 32:314-331 (1980); Fischer, *et al.* (PCT Application WO90/13668); Uhlen, PCT Application WO90/11369).

Polymorphisms can also be identified by Single Strand Conformation

Polymorphism (SSCP) analysis. The SSCP technique is a method capable of identifying

5 most sequence variations in a single strand of DNA, typically between 150 and 250 nucleotides in length (Elles, *Methods in Molecular Medicine: Molecular Diagnosis of Genetic Diseases*, Humana Press (1996), the entirety of which is herein incorporated by reference); Orita *et al.*, *Genomics* 5: 874-879 (1989), the entirety of which is herein incorporated by reference). Under denaturing conditions a single strand of DNA will
10 adopt a conformation that is uniquely dependent on its sequence conformation. This conformation usually will be different, even if only a single base is changed. Most conformations have been reported to alter the physical configuration or size sufficiently to be detectable by electrophoresis. A number of protocols have been described for SSCP including, but not limited to Lee *et al.*, *Anal. Biochem.* 205: 289-293 (1992), the entirety
15 of which is herein incorporated by reference; Suzuki *et al.*, *Anal. Biochem.* 192: 82-84 (1991), the entirety of which is herein incorporated by reference; Lo *et al.*, *Nucleic Acids Research* 20: 1005-1009 (1992), the entirety of which is herein incorporated by reference; Sarkar *et al.*, *Genomics* 13: 441-443 (1992), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present
20 invention, may be utilized as markers or probes to detect polymorphisms by SSCP analysis.

Polymorphisms may also be found using a DNA fingerprinting technique called amplified fragment length polymorphism (AFLP), which is based on the selective PCR amplification of restriction fragments from a total digest of genomic DNA to profile that
25 DNA. Vos, *et al.*, *Nucleic Acids Res.* 23:4407-4414 (1995), the entirety of which is herein incorporated by reference. This method allows for the specific co-amplification of

high numbers of restriction fragments, which can be visualized by PCR without knowledge of the nucleic acid sequence.

AFLP employs basically three steps. Initially, a sample of genomic DNA is cut with restriction enzymes and oligonucleotide adapters are ligated to the restriction fragments of the DNA. The restriction fragments are then amplified using PCR by using the adapter and restriction sequence as target sites for primer annealing. The selective amplification is achieved by the use of primers that extend into the restriction fragments, amplifying only those fragments in which the primer extensions match the nucleotide flanking the restriction sites. These amplified fragments are then visualized on a denaturing polyacrylamide gel.

AFLP analysis has been performed on *Salix* (Beismann, *et al.*, *Mol. Ecol.* 6:989-993 (1997), the entirety of which is herein incorporated by reference); *Acinetobacter* (Janssen, *et al.*, *Int. J. Syst. Bacteriol* 47:1179-1187 (1997), the entirety of which is herein incorporated by reference), *Aeromonas popoffi* (Huys, *et al.*, *Int. J. Syst. Bacteriol.* 47:1165-1171 (1997), the entirety of which is herein incorporated by reference), rice (McCouch, *et al.*, *Plant Mol. Biol.* 35:89-99 (1997), the entirety of which is herein incorporated by reference); Nandi, *et al.*, *Mol. Gen. Genet.* 255:1-8 (1997); Cho, *et al.*, *Genome* 39:373-378 (1996), herein incorporated by reference), barley (*Hordeum vulgare*)(Simons, *et al.*, *Genomics* 44:61-70 (1997), the entirety of which is herein incorporated by reference; Waugh, *et al.*, *Mol. Gen. Genet.* 255:311-321 (1997), the entirety of which is herein incorporated by reference; Qi, *et al.*, *Mol. Gen Genet.* 254:330-336 (1997), the entirety of which is herein incorporated by reference; Becker, *et al.*, *Mol. Gen. Genet.* 249:65-73 (1995), the entirety of which is herein incorporated by reference), potato (Van der Voort, *et al.*, *Mol. Gen. Genet.* 255:438-447 (1997), the entirety of which is herein incorporated by reference; Meksem, *et al.*, *Mol. Gen. Genet.* 249:74-81 (1995), the entirety of which is herein incorporated by reference), *Phytophthora infestans* (Van der Lee, *et al.*, *Fungal Genet. Biol.* 21:278-291 (1997), the entirety of which is herein

incorporated by reference), *Bacillus anthracis* (Keim, *et al.*, *J. Bacteriol.* 179:818-824 (1997)), *Astragalus cremnophylax* (Travis, *et al.*, *Mol. Ecol.* 5:735-745 (1996), the entirety of which is herein incorporated by reference), *Arabidopsis* (Cnops, *et al.*, *Mol. Gen. Genet.* 253:32-41 (1996), the entirety of which is herein incorporated by reference),

5 *Escherichia coli* (Lin, *et al.*, *Nucleic Acids Res.* 24:3649-3650 (1996), the entirety of which is herein incorporated by reference), *Aeromonas* (Huys, *et al.*, *Int. J. Syst. Bacteriol.* 46:572-580 (1996), the entirety of which is herein incorporated by reference), nematode (Folkertsma, *et al.*, *Mol. Plant Microbe Interact.* 9:47-54 (1996), the entirety of which is herein incorporated by reference), tomato (Thomas, *et al.*, *Plant J.* 8:785-794

10 (1995), the entirety of which is herein incorporated by reference), and human (Latorra, *et al.*, *PCR Methods Appl.* 3:351-358 (1994)). AFLP analysis has also been used for fingerprinting mRNA (Money, *et al.*, *Nucleic Acids Res.* 24:2616-2617 (1996), the entirety of which is herein incorporated by reference; Bachem, *et al.*, *Plant J.* 9:745-753 (1996), the entirety of which is herein incorporated by reference). It is understood that

15 one or more of the nucleic acids of the present invention, may be utilized as markers or probes to detect polymorphisms by AFLP analysis for fingerprinting mRNA.

Polymorphisms may also be found using random amplified polymorphic DNA (RAPD) (Williams *et al.*, *Nucl. Acids Res.* 18: 6531-6535 (1990), the entirety of which is herein incorporated by reference) and cleaveable amplified polymorphic sequences

20 (CAPS) (Lyamichev *et al.*, *Science* 260: 778-783 (1993), the entirety of which is herein incorporated by reference). It is understood that one or more of the nucleic acids of the present invention, may be utilized as markers or probes to detect polymorphisms by RAPD or CAPS analysis.

Polymorphisms are useful, through linkage analysis, to define the genetic

25 distances or physical distances between polymorphic traits. A physical map or ordered array of genomic DNA fragments in the desired region containing the gene may be used to characterize and isolate genes corresponding to desirable traits. For this purpose, yeast

artificial chromosomes (YACs), bacterial artificial chromosomes (BACs), and cosmid
are appropriate vectors for cloning large segments of DNA molecules. Although fewer
clones are needed to make a contig for a specific genomic region by using YACs (Agyare
et al., *Genome Res.* 7: 1-9 (1997), the entirety of which is herein incorporated by
5 reference; James *et al.*, *Genomics* 32: 425-430 (1996), the entirety of which is herein
incorporated by reference), chimerism in the inserted DNA fragment can arise. Cosmids
are convenient for handling smaller-size DNA molecules and may be used for
transformation in developing transgenic plants. BACs also carry DNA fragments and are
less prone to chimerism.

10 Through genetic mapping, a fine scale linkage map can be developed using DNA
markers and, then, a genomic DNA library of large-sized fragments can be screened with
molecular markers linked to the desired trait. Molecular markers are advantageous for
agronomic traits that are otherwise difficult to tag, such as resistance to pathogens, insects
and nematodes, tolerance to abiotic stress, quality parameters and quantitative traits such
15 as high yield potential.

The essential requirements for marker-assisted selection in a plant breeding
program are: (1) the marker(s) should co-segregate or be closely linked with the desired
trait; (2) an efficient means of screening large populations for the molecular marker(s)
should be available; and (3) the screening technique should have high reproducibility
20 across laboratories and preferably be economical to use and be user-friendly.

The genetic linkage of marker molecules can be established by a gene mapping
model such as, without limitation, the flanking marker model reported by Lander and
Botstein, *Genetics* 121:185-199 (1989) and the interval mapping, based on maximum
likelihood methods described by Lander and Botstein, *Genetics* 121:185-199 (1989) and
25 implemented in the software package MAPMAKER/QTL (Lincoln and Lander, *Mapping
Genes Controlling Quantitative Traits Using MAPMAKER/QTL*, Whitehead Institute for
Biomedical Research, Massachusetts, (1990). Additional software includes Qgene,

Version 2.23 (1996), Department of Plant Breeding and Biometry, 266 Emerson Hall, Cornell University, Ithaca, NY, the manual of which is herein incorporated by reference in its entirety). Use of Qgene software is a particularly preferred approach.

A maximum likelihood estimate (MLE) for the presence of a marker is calculated, together with an MLE assuming no QTL effect, to avoid false positives. A \log_{10} of an odds ratio (LOD) is then calculated as: $\text{LOD} = \log_{10}(\text{MLE for the presence of a QTL} / \text{MLE given no linked QTL})$.

The LOD score essentially indicates how much more likely the data are to have arisen assuming the presence of a QTL than in its absence. The LOD threshold value for avoiding a false positive with a given confidence, say 95%, depends on the number of markers and the length of the genome. Graphs indicating LOD thresholds are set forth in Lander and Botstein, *Genetics* 121:185-199 (1989) the entirety of which is herein incorporated by reference and further described by Arús and Moreno-González, *Plant Breeding*, Hayward *et al.*, (eds.) Chapman & Hall, London, pp. 314-331 (1993), the entirety of which is herein incorporated by reference.

Additional models can be used. Many modifications and alternative approaches to interval mapping have been reported, including the use of non-parametric methods (Kruglyak and Lander, *Genetics* 139:1421-1428 (1995), the entirety of which is herein incorporated by reference). Multiple regression methods or models can be also be used, in which the trait is regressed on a large number of markers (Jansen, *Biometrics in Plant Breeding*, van Oijen and Jansen (eds.), Proceedings of the Ninth Meeting of the Eucarpia Section Biometrics in Plant Breeding, The Netherlands, pp. 116-124 (1994); Weber and Wricke, *Advances in Plant Breeding*, Blackwell, Berlin, 16 (1994), both of which is herein incorporated by reference in their entirety). Procedures combining interval mapping with regression analysis, whereby the phenotype is regressed onto a single putative QTL at a given marker interval and at the same time onto a number of markers that serve as 'cofactors,' have been reported by Jansen and Stam, *Genetics* 136:1447-1455

(1994), the entirety of which is herein incorporated by reference and Zeng, *Genetics* 136:1457-1468 (1994) the entirety of which is herein incorporated by reference.

Generally, the use of cofactors reduces the bias and sampling error of the estimated QTL positions (Utz and Melchinger, *Biometrics in Plant Breeding*, van Oijen and Jansen (eds.)

- 5 Proceedings of the Ninth Meeting of the Eucarpia Section Biometrics in Plant Breeding, The Netherlands, pp.195-204 (1994), the entirety of which is herein incorporated by reference, thereby improving the precision and efficiency of QTL mapping (Zeng, *Genetics* 136:1457-1468 (1994)). These models can be extended to multi-environment experiments to analyze genotype-environment interactions (Jansen *et al.*, *Theo. Appl. Genet.* 91:33-37 (1995), the entirety of which is herein incorporated by reference).
- 10

Selection of an appropriate mapping population is important to map construction. The choice of an appropriate mapping population depends on the type of marker systems employed (Tanksley *et al.*, *Molecular mapping plant chromosomes. Chromosome structure and function: Impact of new concepts*, Gustafson and Appels (eds.), Plenum

- 15 Press, New York, pp 157-173 (1988), the entirety of which is herein incorporated by reference). Consideration must be given to the source of parents (adapted vs. exotic) used in the mapping population. Chromosome pairing and recombination rates can be severely disturbed (suppressed) in wide crosses (adapted x exotic) and generally yield greatly reduced linkage distances. Wide crosses will usually provide segregating populations
- 20 with a relatively large array of polymorphisms when compared to progeny in a narrow cross (adapted x adapted).

- An F_2 population is the first generation of selfing after the hybrid seed is produced. Usually a single F_1 plant is selfed to generate a population segregating for all the genes in Mendelian (1:2:1) fashion. Maximum genetic information is obtained from a
- 25 completely classified F_2 population using a codominant marker system (Mather, *Measurement of Linkage in Heredity*, Methuen and Co., (1938), the entirety of which is herein incorporated by reference). In the case of dominant markers, progeny tests (e.g.

F_3 , BCF_2) are required to identify the heterozygotes, thus making it equivalent to a completely classified F_2 population. However, this procedure is often prohibitive because of the cost and time involved in progeny testing. Progeny testing of F_2 individuals is often used in map construction where phenotypes do not consistently reflect genotype (e.g. disease resistance) or where trait expression is controlled by a QTL. Segregation data from progeny test populations (e.g. F_3 or BCF_2) can be used in map construction. Marker-assisted selection can then be applied to cross progeny based on marker-trait map associations (F_2 , F_3), where linkage groups have not been completely disassociated by recombination events (i.e., maximum disequilibrium).

Recombinant inbred lines (RIL) (genetically related lines; usually $>F_5$, developed from continuously selfing F_2 lines towards homozygosity) can be used as a mapping population. Information obtained from dominant markers can be maximized by using RIL because all loci are homozygous or nearly so. Under conditions of tight linkage (i.e., about $<10\%$ recombination), dominant and co-dominant markers evaluated in RIL populations provide more information per individual than either marker type in backcross populations (Reiter *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:1477-1481 (1992), the entirety of which is herein incorporated by reference). However, as the distance between markers becomes larger (i.e., loci become more independent), the information in RIL populations decreases dramatically when compared to codominant markers.

Backcross populations (e.g., generated from a cross between a successful variety (recurrent parent) and another variety (donor parent) carrying a trait not present in the former) can be utilized as a mapping population. A series of backcrosses to the recurrent parent can be made to recover most of its desirable traits. Thus a population is created consisting of individuals nearly like the recurrent parent but each individual carries varying amounts or mosaic of genomic regions from the donor parent. Backcross populations can be useful for mapping dominant markers if all loci in the recurrent parent are homozygous and the donor and recurrent parent have contrasting polymorphic marker

alleles (Reiter *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 89:1477-1481 (1992)). Information obtained from backcross populations using either codominant or dominant markers is less than that obtained from F₂ populations because one, rather than two, recombinant gametes are sampled per plant. Backcross populations, however, are more informative (at
 5 low marker saturation) when compared to RILs as the distance between linked loci increases in RIL populations (i.e. about 15% recombination). Increased recombination can be beneficial for resolution of tight linkages, but may be undesirable in the construction of maps with low marker saturation.

Near-isogenic lines (NIL) created by many backcrosses to produce an array of
 10 individuals that are nearly identical in genetic composition except for the trait or genomic region under interrogation can be used as a mapping population. In mapping with NILs, only a portion of the polymorphic loci are expected to map to a selected region.

Bulk segregant analysis (BSA) is a method developed for the rapid identification of linkage between markers and traits of interest (Michelmore *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88:9828-9832 (1991), the entirety of which is herein incorporated by
 15 reference). In BSA, two bulked DNA samples are drawn from a segregating population originating from a single cross. These bulks contain individuals that are identical for a particular trait (resistant or susceptible to particular disease) or genomic region but arbitrary at unlinked regions (i.e. heterozygous). Regions unlinked to the target region
 20 will not differ between the bulked samples of many individuals in BSA.

It is understood that one or more of the nucleic acid molecules of the present invention may be used as molecular markers. It is also understood that one or more of the protein molecules of the present invention may be used as molecular markers.

In accordance with this aspect of the present invention, a sample nucleic acid is
 25 obtained from plants cells or tissues. Any source of nucleic acid may be used. Preferably, the nucleic acid is genomic DNA. The nucleic acid is subjected to restriction endonuclease digestion. For example, one or more EST nucleic acid molecule or

fragment thereof can be used as a probe in accordance with the above-described polymorphic methods. The polymorphism obtained in this approach can then be cloned to identify the mutation at the coding region which alters the protein's structure or regulatory region of the gene which affects its expression level.

5 In one aspect of the present invention, an evaluation can be conducted to determine whether a particular mRNA molecule is present. One or more of the nucleic acid molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention are utilized to detect the presence or quantity of the mRNA species. Such molecules are then incubated with cell or tissue extracts of a plant
10 under conditions sufficient to permit nucleic acid hybridization. The detection of double-stranded probe-mRNA hybrid molecules is indicative of the presence of the mRNA; the amount of such hybrid formed is proportional to the amount of mRNA. Thus, such probes may be used to ascertain the level and extent of the mRNA production in a plant's cells or tissues. Such nucleic acid hybridization may be conducted under quantitative
15 conditions (thereby providing a numerical value of the amount of the mRNA present). Alternatively, the assay may be conducted as a qualitative assay that indicates either that the mRNA is present, or that its level exceeds a user set, predefined value.

A principle of *in situ* hybridization is that a labeled, single-stranded nucleic acid probe will hybridize to a complementary strand of cellular DNA or RNA and, under the
20 appropriate conditions, these molecules will form a stable hybrid. When nucleic acid hybridization is combined with histological techniques, specific DNA or RNA sequences can be identified within a single cell. An advantage of *in situ* hybridization over more conventional techniques for the detection of nucleic acids is that it allows an investigator to determine the precise spatial population (Angerer *et al.*, *Dev. Biol.* 101: 477-484
25 (1984), the entirety of which is herein incorporated by reference; Angerer *et al.*, *Dev. Biol.* 112: 157-166 (1985), the entirety of which is herein incorporated by reference; Dixon *et al.*, *EMBO J.* 10: 1317-1324 (1991), the entirety of which is herein incorporated

by reference). *In situ* hybridization may be used to measure the steady-state level of RNA accumulation. It is a sensitive technique and RNA sequences present in as few as 5-10 copies per cell can be detected (Hardin *et al.*, *J. Mol. Biol.* 202: 417-431.(1989), the entirety of which is herein incorporated by reference). A number of protocols have been devised for *in situ* hybridization, each with tissue preparation, hybridization, and washing conditions (Meyerowitz, *Plant Mol. Biol. Rep.* 5: 242-250 (1987), the entirety of which is herein incorporated by reference; Cox and Goldberg, In: *Plant Molecular Biology: A Practical Approach* (ed. C.H. Shaw), pp. 1-35. IRL Press, Oxford (1988), the entirety of which is herein incorporated by reference; Raikhel *et al.*, *In situ RNA hybridization in plant tissues*. In *Plant Molecular Biology Manual*, vol. B9: 1-32. Kluwer Academic Publisher, Dordrecht, Belgium (1989), the entirety of which is herein incorporated by reference).

In situ hybridization also allows for the localization of proteins within a tissue or cell (Wilkinson, *In Situ Hybridization*, Oxford University Press, Oxford (1992), the entirety of which is herein incorporated by reference; Langdale, *In Situ Hybridization* 165-179 In: *The Maize Handbook*, eds. Freeling and Walbot, Springer-Verlag, New York (1994), the entirety of which is herein incorporated by reference). It is understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one or more of the antibodies of the present invention may be utilized to detect the level or pattern of a protein or fragment thereof by *in situ* hybridization.

Fluorescent *in situ* hybridization also enables the localization of a particular DNA sequence along a chromosome which is useful, among other uses, for gene mapping, following chromosomes in hybrid lines or detecting chromosomes with translocations, transversions or deletions. *In situ* hybridization has been used to identify chromosomes in several plant species (Griffor *et al.*, *Plant Mol. Biol.* 17: 101-109 (1991), the entirety of which is herein incorporated by reference; Gustafson *et al.*, *Proc. Nat'l. Acad. Sci.*

(U.S.A). 87: 1899-1902 (1990), herein incorporated by reference; Mukai and Gill, *Genome* 34: 448-452. (1991); Schwarzacher and Heslop-Harrison, *Genome* 34: 317-323 (1991); Wang *et al.*, *Jpn. J. Genet.* 66: 313-316 (1991), the entirety of which is herein incorporated by reference; Parra and Windle, *Nature Genetics*, 5: 17-21 (1993), the
 5 entirety of which is herein incorporated by reference). It is understood that the nucleic acid molecules of the present invention may be used as probes or markers to localize sequences along a chromosome.

It is also understood that one or more of the molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention or one
 10 or more of the antibodies of the present invention may be utilized to detect the expression level or pattern of a protein or mRNA thereof by *in situ* hybridization.

Another method to localize the expression of a molecule is tissue printing. Tissue printing provides a way to screen, at the same time on the same membrane many tissue sections from different plants or different developmental stages. Tissue-printing
 15 procedures utilize films designed to immobilize proteins and nucleic acids. In essence, a freshly cut section of an organ is pressed gently onto nitrocellulose paper, nylon membrane or polyvinylidene difluoride membrane. Such membranes are commercially available (e.g. Millipore, Bedford, Massachusetts). The contents of the cut cell transfer onto the membrane, and the molecules are immobilized to the membrane. The
 20 immobilized molecules form a latent print that can be visualized with appropriate probes. When a plant tissue print is made on nitrocellulose paper, the cell walls leave a physical print that makes the anatomy visible without further treatment (Varner and Taylor, *Plant Physiol.* 91: 31-33 (1989), the entirety of which is herein incorporated by reference).

Tissue printing on substrate films is described by Daoust, *Exp. Cell Res.* 12: 203-
 25 211 (1957), the entirety of which is herein incorporated by reference, who detected amylase, protease, ribonuclease, and deoxyribonuclease in animal tissues using starch, gelatin, and agar films. These techniques can be applied to plant tissues (Yomo and

Taylor, *Planta* 112:35-43 (1973); Harris and Chrispeels, *Plant Physiol.* 56: 292-299 (1975). Advances in membrane technology have increased the range of applications of Daoust's tissue-printing techniques allowing (Cassab and Varner, *J. Cell. Biol.* 105: 2581-2588 (1987), the entirety of which is herein incorporated by reference; the

5 histochemical localization of various plant enzymes and deoxyribonuclease on nitrocellulose paper and nylon (Spruce *et al.*, *Phytochemistry*, 26: 2901-2903 (1987), the entirety of which is herein incorporated by reference; Barres *et al.* *Neuron* 5: 527-544 (1990), the entirety of which is herein incorporated by reference; the entirety of which is herein incorporated by reference; Reid and Pont-Lezica, *Tissue Printing: Tools for the*

10 *Study of Anatomy, Histochemistry, and Gene Expression*, Academic Press, New York, New York (1992), the entirety of which is herein incorporated by reference; Reid *et al.* *Plant Physiol.* 93: 160-165 (1990), herein incorporate by reference; Ye *et al.* *Plant J.* 1: 175-183 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the molecules of the present invention,

15 preferably one or more of the EST nucleic acid molecules of the present invention or one or more of the antibodies of the present invention may be utilized to detect the presence or quantity of a protein by tissue printing.

Further, it is also understood that any of the nucleic acid molecules of the present invention may be used as marker nucleic acids and or probes in connection with methods

20 that require probes or marker nucleic acids. As used herein, a probe is an agent that is utilized to determine an attribute or feature (e.g. presence or absence, location, correlation, etc.) or a molecule, cell, tissue or plant. As used herein, a marker nucleic acid is a nucleic acid molecule that is utilized to determine an attribute or feature (e.g., presence or absence, location, correlation, etc.) or a molecule, cell, tissue or plant.

25 A microarray-based method for high-throughput monitoring of plant gene expression may be utilized to measure gene-specific hybridization targets. This 'chip'-based approach involves using microarrays of nucleic acid molecules as gene-specific

hybridization targets to quantitatively measure expression of the corresponding plant genes (Schena *et al.*, *Science* 270: 467-470 (1995), the entirety of which is herein incorporated by reference; Shalon, Ph.D. Thesis. Stanford University (1996), the entirety of which is herein incorporated by reference). Every nucleotide in a large sequence can be
 5 queried at the same time. Hybridization can be used to efficiently analyze large amounts of nucleotide sequence.

Several microarray methods have been described. One method compares the sequences to be analyzed by hybridization to a set of oligonucleotides representing all possible subsequences (Bains and Smith, *J. Theor. Biol.* 135: 303 (1989), the entirety of
 10 which is herein incorporated by reference). A second method hybridizes the sample to an array of oligonucleotide probes. An array consisting of oligonucleotides complementary to subsequences of a target sequence can be used to determine the identity of a target sequence, measure its amount, and detect differences between the target and a reference sequence. Nucleic acid molecules microarrays may also be screened with protein
 15 molecules or fragments thereof to determine nucleic acid molecules that specifically bind protein molecules or fragments thereof.

The microarray approach may be used with polypeptide targets (U.S. Patent No. 5,445,934; U.S. Patent No: 5,143,854; U.S. Patent No. 5,079,600; U.S. Patent No. 4,923,901, all of which are herein incorporated by reference in their entirety).
 20 Essentially, polypeptides are synthesized on a substrate (microarray) and these polypeptides can be screened with either protein molecules or fragments thereof or nucleic acid molecules in order to screen for either protein molecules or fragments thereof or nucleic acid molecules that specifically bind the target polypeptides. Implementation of these techniques rely on recently developed combinatorial technologies to generate any
 25 ordered array of a large number of oligonucleotide probes (Fodor *et al.*, *Science* 251:767-773 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the molecules of the present invention, preferably one or more of the nucleic acid molecules or protein molecules or fragments thereof of the present invention may be utilized in a microarray based method.

In a preferred embodiment of the present invention microarrays may be prepared
 5 that comprise nucleic acid molecules where preferably at least 10%, preferably at least 25%, more preferably at least 50% and even more preferably at least 75%, 80%, 85%, 90% or 95% of the nucleic acid molecules located on that array are selected from the group of nucleic acid molecules that specifically hybridize to one or more nucleic acid molecule having a nucleic acid sequence selected from the group of SEQ ID NO: 1
 10 through SEQ ID NO: 57264 or complement thereof or fragments of either.

A particular preferred microarray embodiment of the present invention is a microarray comprising nucleic acid molecules encoding genes or fragments thereof that are homologues of known genes or nucleic acid molecules that comprise genes or fragment thereof that elicit only limited or no matches to known genes. A further
 15 preferred microarray embodiment of the present invention is a microarray comprising nucleic acid molecules having genes or fragments thereof that are homologues of known genes and nucleic acid molecules that comprise genes or fragment thereof that elicit only limited or no matches to known genes. Site-directed mutagenesis may be utilized to modify nucleic acid sequences, particularly as it is a technique that allows one or more of
 20 the amino acids encoded by a nucleic acid molecule to be altered (e.g. a threonine to be replaced by a methionine). Three basic methods for site-directed mutagenesis are often employed. These are cassette mutagenesis (Wells *et al.*, *Gene* 34:315-23 (1985), the entirety of which is herein incorporated by reference), primer extension (Gilliam *et al.*, *Gene* 12:129-137 (1980), the entirety of which is herein incorporated by reference);
 25 Zoller and Smith, *Methods Enzymol.* 100:468-500 (1983), the entirety of which is herein incorporated by reference; and Dalbadie-McFarland *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 79:6409-6413 (1982), the entirety of which is herein incorporated by reference) and

methods based upon PCR (Scharf *et al.*, *Science* 233:1076-1078 (1986), the entirety of which is herein incorporated by reference; Higuchi *et al.*, *Nucleic Acids Res.* 16:7351-7367 (1988), the entirety of which is herein incorporated by reference). Site-directed mutagenesis approaches are also described in European Patent 0 385 962, the entirety of which is herein incorporated by reference, European Patent 0 359 472, the entirety of which is herein incorporated by reference, and PCT Patent Application WO 93/07278, the entirety of which is herein incorporated by reference.

Site-directed mutagenesis strategies have been applied to plants for both *in vitro* as well as *in vivo* site-directed mutagenesis (Lanz *et al.*, *J. Biol. Chem.* 266:9971-6 (1991), the entirety of which is herein incorporated by reference; Kovgan and Zhdanov, *Biotechnologiya* 5:148-154; No. 207160n, Chemical Abstracts 110:225 (1989), the entirety of which is herein incorporated by reference; Ge *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:4037-4041 (1989), the entirety of which is herein incorporated by reference, Zhu *et al.*, *J. Biol. Chem.* 271:18494-18498 (1996), Chu *et al.*, *Biochemistry* 33:6150-6157 (1994), the entirety of which is herein incorporated by reference, Small *et al.*, *EMBO J.* 11:1291-1296 (1992), the entirety of which is herein incorporated by reference, Cho *et al.*, *Mol. Biotechnol.* 8:13-16 (1997), Kita *et al.*, *J. Biol. Chem.* 271:26529-26535 (1996), the entirety of which is herein incorporated by reference, Jin *et al.*, *Mol. Microbiol.* 7:555-562 (1993), the entirety of which is herein incorporated by reference, Hatfield and Vierstra, *J. Biol. Chem.* 267:14799-14803 (1992), the entirety of which is herein incorporated by reference, Zhao *et al.*, *Biochemistry* 31:5093-5099 (1992), the entirety of which is herein incorporated by reference).

Any of the nucleic acid molecules of the present invention may either be modified by site-directed mutagenesis or used as, for example, nucleic acid molecules that are used to target other nucleic acid molecules for modification. It is understood that mutants with more than one altered nucleotide can be constructed using techniques that practitioners skilled in the art are familiar with such as isolating restriction fragments and ligating such

fragments into an expression vector (*see, for example, Sambrook et al., Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Press (1989)).

Sequence-specific DNA-binding proteins play a role in the regulation of transcription. The isolation of recombinant cDNAs encoding these proteins facilitates the biochemical analysis of their structural and functional properties. Genes encoding such DNA-binding proteins have been isolated using classical genetics (Vollbrecht *et al.*, *Nature* 350: 241-243 (1991), the entirety of which is herein incorporated by reference) and molecular biochemical approaches, including the screening of recombinant cDNA libraries with antibodies (Landschulz *et al.*, *Genes Dev.* 2: 786-800 (1988), the entirety of which is herein incorporated by reference) or DNA probes (Bodner *et al.*, *Cell* 55: 505-518 (1988), the entirety of which is herein incorporated by reference). In addition, an *in situ* screening procedure has been used and has facilitated the isolation of sequence-specific DNA-binding proteins from various plant species (Gilmartin *et al.*, *Plant Cell* 4: 839-849 (1992), the entirety of which is herein incorporated by reference; Schindler *et al.*, *EMBO J.* 11: 1261-1273 (1992) the entirety of which is herein incorporated by reference). An *in situ* screening protocol does not require the purification of the protein of interest (Vinson *et al.*, *Genes Dev.* 2: 801-806 (1988), the entirety of which is herein incorporated by reference; Singh *et al.*, *Cell* 52: 415-423 (1988), the entirety of which is herein incorporated by reference).

Steps may be employed to characterize DNA-protein interactions. The first is to identify promoter fragments that interact with DNA-binding proteins, to titrate binding activity, to determine the specificity of binding, and to determine whether a given DNA-binding activity can interact with related DNA sequences (Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, 2nd edition. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York (1989). Electrophoretic mobility-shift assay is a widely used assay. The assay provides a simple, rapid, and sensitive method for detecting DNA-binding proteins based on the observation that the mobility of a DNA fragment through a

nondenaturing, low-ionic strength polyacrylamide gel is retarded upon association with a DNA-binding protein (Fried and Crother, *Nucleic Acids Res.* 9: 6505-6525 (1981), the entirety of which is herein incorporated by reference). When one or more specific binding activities have been identified, the exact sequence of the DNA bound by the protein may be determined. Several procedures for characterizing protein/DNA-binding sites are used, including methylation and ethylation interference assays (Maxam and Gilbert, *Methods Enzymol.* 65: 499-560 (1980), the entirety of which is herein incorporated by reference; Wissman and Hillen, *Methods Enzymol.* 208: 365-379 (1991), the entirety of which is herein incorporated by reference) and footprinting techniques employing DNase I (Galas and Schmitz, *Nucleic Acids Res.* 5: 3157-3170 (1978), the entirety of which is herein incorporated by reference), 1,10-phenanthroline-copper ion methods (Sigman *et al.*, *Methods Enzymol.* 208: 365-379 (1991), the entirety of which is herein incorporated by reference) or hydroxyl radical methods (Dixon *et al.*, *Methods Enzymol.* 208: 380-413 (1991), the entirety of which is herein incorporated by reference).

It is understood that one or more of the nucleic acid molecules of the present invention, preferably one or more of the EST nucleic acid molecules of the present invention may be utilized to identify a protein or fragment thereof that specifically binds to a nucleic acid molecule of the present invention. It is also understood that one or more of the protein molecules or fragments thereof of the present invention may be utilized to identify a nucleic acid molecule that specifically binds to it.

The two-hybrid system is based on the fact that many cellular functions are carried out by proteins that interact (physically) with one another. Two-hybrid systems have been used to probe the function of new proteins (Chien *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 88: 9578-9582 (1991) the entirety of which is herein incorporated by reference; Durfee *et al.*, *Genes Dev.* 7: 555-569 (1993) the entirety of which is herein incorporated by reference; Choi *et al.*, *Cell* 78: 499-512 (1994), the entirety of which is herein

incorporated by reference; Kranz *et al.*, *Genes Dev.* 8: 313-327 (1994), the entirety of which is herein incorporated by reference).

Interaction mating techniques have facilitated a number of two-hybrid studies of protein-protein interaction. Interaction mating has been used to examine interactions
 5 between small sets of tens of proteins (Finley and Brent, *Proc. Natl. Acad. Sci. (U.S.A.)* 91: 12098-12984 (1994), the entirety of which is herein incorporated by reference), larger sets of hundreds of proteins, (Bendixen *et al.*, *Nucl. Acids Res.* 22: 1778-1779 (1994), the entirety of which is herein incorporated by reference) and to comprehensively map proteins encoded by a small genome (Bartel *et al.*, *Nature Genetics* 12: 72-77 (1996), the
 10 entirety of which is herein incorporated by reference). This technique utilizes proteins fused to the DNA-binding domain and proteins fused to the activation domain. They are expressed in two different haploid yeast strains of opposite mating type, and the strains are mated to determine if the two proteins interact. Mating occurs when haploid yeast strains come into contact and result in the fusion of the two haploids into a diploid yeast
 15 strain. An interaction can be determined by the activation of a two-hybrid reporter gene in the diploid strain. The primary advantage of this technique is that it reduces the number of yeast transformations needed to test individual interactions. It is understood that the protein-protein interactions of protein or fragments thereof of the present invention may be investigated using the two-hybrid system and that any of the nucleic
 20 acid molecules of the present invention that encode such proteins or fragments thereof may be used to transform yeast in the two-hybrid system.

Synechocystis 6803 is a photosynthetic Cyanobacterium capable of oxygenic photosynthesis as well as heterotrophic growth in the absence of light. The entire genome has been sequenced, and it is reported to have a circular genome size of 3.57 Mbp containing 3168
 25 potential open reading frames. Open reading frames (ORFs) were identified based upon their homology to other reported ORFs and by using ORF identification computer programs. Sixteen hundred potential ORFs were assigned based on their homology to previously identified ORFs.

Of these 1600 ORFs, 145 were identical to reported ORFs (Kaneko *et al.*, *DNA Research* 3:109-36 (1996), herein incorporated by reference in its entirety).

Several prokaryote promoters have been used in *Synechocystis* to express heterologous genes including the tac, lac, and lambda phage promoters (Bryant (ed.), *The Molecular Biology of Cyanobacteria*, Kluwer Academic Publishers, (1994); Ferino and Chauvat, *Gene* 84:257-266 (1989), both of which are herein incorporated by reference in their entirety). Several bacterial origins of replication such as RSF1010 and ACYC are reported to replicate in *Synechocystis* (Mermet-Bouvier and Chauvat, *Current Microbiology* 28:145-148 (1994); Kuhlemeier *et al.*, *Mol. Gen. Genet.* 184:249-254 (1981), both of which are herein incorporated by reference in their entirety).

Synechocystis has been used to study gene regulation by gene replacement through homologous recombination or by gene disruption using antibiotic resistance markers (Pakrasi *et al.*, *EMBO* 7:325-332 (1988), herein incorporated by reference in its entirety). In such gene regulation studies, double reciprocal homologous regions of the host genome flanking the gene of interest recombine to stably integrate the gene of interest into the genome. The gene of interest can be expressed once that gene has been stably integrated into the genome. Biochemical analysis can be performed to study the effect of the replaced or deleted gene.

It is understood that the agents of the present invention may be employed in a *Synechocystis* system.

Exogenous genetic material may be transferred into a plant cell and the plant cell regenerated into a whole, fertile or sterile plant. Exogenous genetic material is any genetic material, whether naturally occurring or otherwise, from any source that is capable of being inserted into any organism. Such genetic material may be transferred into either monocotyledons and dicotyledons including but not limited to the crops, maize and soybean (See specifically, Chistou, *Particle Bombardment for Genetic Engineering of Plants*, pp 63-69 (maize), pp50-60 (soybean), Biotechnology Intelligence Unit. Academic Press, San Diego, California (1996), the entirety of which is herein incorporated by

reference and generally Chistou, *Particle Bombardment for Genetic Engineering of Plants*, Biotechnology Intelligence Unit. Academic Press, San Diego, California (1996), the entirety of which is herein incorporated by reference).

Transfer of a nucleic acid that encodes for a protein can result in overexpression
 5 of that protein in a transformed cell or transgenic plant. One or more of the proteins or fragments thereof encoded by nucleic acid molecules of the present invention may be overexpressed in a transformed cell or transformed plant. Such overexpression may be the result of transient or stable transfer of the exogenous material.

Exogenous genetic material may be transferred into a plant cell by the use of a
 10 DNA vector or construct designed for such a purpose. Design of such a vector is generally within the skill of the art (*See*, *Plant Molecular Biology: A Laboratory Manual* eds. Clark, Springer, New York (1997), the entirety of which is herein incorporated by reference).

A construct or vector may include a plant promoter to express the protein or
 15 protein fragment of choice. A number of promoters which are active in plant cells have been described in the literature. These include the nopaline synthase (NOS) promoter (Ebert *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 84:5745-5749 (1987), the entirety of which is herein incorporated by reference), the octopine synthase (OCS) promoter (which are carried on tumor-inducing plasmids of *Agrobacterium tumefaciens*), the caulimovirus
 20 promoters such as the cauliflower mosaic virus (CaMV) 19S promoter (Lawton *et al.*, *Plant Mol. Biol.* 9:315-324 (1987), the entirety of which is herein incorporated by reference) and the CAMV 35S promoter (Odell *et al.*, *Nature* 313:810-812 (1985), the entirety of which is herein incorporated by reference), the figwort mosaic virus 35S-promoter, the light-inducible promoter from the small subunit of ribulose-1,5-bis-
 25 phosphate carboxylase (ssRUBISCO), the Adh promoter (Walker *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 84:6624-6628 (1987), the entirety of which is herein incorporated by reference), the sucrose synthase promoter (Yang *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*

87:4144-4148 (1990), the entirety of which is herein incorporated by reference), the R gene complex promoter (Chandler *et al.*, *The Plant Cell* 1:1175-1183 (1989), the entirety of which is herein incorporated by reference), and the chlorophyll a/b binding protein gene promoter, etc. These promoters have been used to create DNA constructs which
 5 have been expressed in plants; *see, e.g.*, PCT publication WO 84/02913, herein incorporated by reference in its entirety.

Promoters which are known or are found to cause transcription of DNA in plant cells can be used in the present invention. Such promoters may be obtained from a variety of sources such as plants and plant viruses. It is preferred that the particular
 10 promoter selected should be capable of causing sufficient expression to result in the production of an effective amount of a protein to cause the desired phenotype. In addition to promoters which are known to cause transcription of DNA in plant cells, other promoters may be identified for use in the current invention by screening a plant cDNA library for genes which are selectively or preferably expressed in the target tissues or
 15 cells.

For the purpose of expression in source tissues of the plant, such as the leaf, seed, root or stem, it is preferred that the promoters utilized in the present invention have relatively high expression in these specific tissues. For this purpose, one may choose from a number of promoters for genes with tissue- or cell-specific or -enhanced
 20 expression. Examples of such promoters reported in the literature include the chloroplast glutamine synthetase GS2 promoter from pea (Edwards *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:3459-3463 (1990), herein incorporated by reference in its entirety), the chloroplast fructose-1,6-biphosphatase (FBPase) promoter from wheat (Lloyd *et al.*, *Mol. Gen. Genet.* 225:209-216 (1991), herein incorporated by reference in its entirety), the
 25 nuclear photosynthetic ST-LS1 promoter from potato (Stockhaus *et al.*, *EMBO J.* 8:2445-2451 (1989), herein incorporated by reference in its entirety), the phenylalanine ammonia-lyase (PAL) promoter and the chalcone synthase (CHS) promoter from

Arabidopsis thaliana. Also reported to be active in photosynthetically active tissues are the ribulose-1,5-bisphosphate carboxylase (RbcS) promoter from eastern larch (*Larix laricina*), the promoter for the *cab* gene, *cab6*, from pine (Yamamoto *et al.*, *Plant Cell Physiol.* 35:773-778 (1994), herein incorporated by reference in its entirety), the promoter for the Cab-1 gene from wheat (Fejes *et al.*, *Plant Mol. Biol.* 15:921-932 (1990), herein incorporated by reference in its entirety), the promoter for the CAB-1 gene from spinach (Lubberstedt *et al.*, *Plant Physiol.* 104:997-1006 (1994), herein incorporated by reference in its entirety), the promoter for the *cab1R* gene from rice (Luan *et al.*, *Plant Cell.* 4:971-981 (1992), the entirety of which is herein incorporated by reference), the pyruvate, orthophosphate dikinase (PPDK) promoter from maize (Matsuoka *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 90: 9586-9590 (1993), herein incorporated by reference in its entirety), the promoter for the tobacco *Lhcb1*2* gene (Cerdan *et al.*, *Plant Mol. Biol.* 33: 245-255. (1997), herein incorporated by reference in its entirety), the *Arabidopsis thaliana* SUC2 sucrose-H⁺ symporter promoter (Truernit *et al.*, *Planta.* 196: 564-570 (1995), herein incorporated by reference in its entirety), and the promoter for the thylacoid membrane proteins from spinach (*psaD*, *psaF*, *psaE*, *PC*, *FNR*, *atpC*, *atpD*, *cab*, *rbcS*). Other promoters for the chlorophyll a/b-binding proteins may also be utilized in the present invention, such as the promoters for *LhcB* gene and *PsbP* gene from white mustard (*Sinapis alba*; Kretsch *et al.*, *Plant Mol. Biol.* 28: 219-229 (1995), the entirety of which is herein incorporated by reference).

For the purpose of expression in sink tissues of the plant, such as the tuber of the potato plant, the fruit of tomato, or the seed of maize, wheat, rice, and barley, it is preferred that the promoters utilized in the present invention have relatively high expression in these specific tissues. A number of promoters for genes with tuber-specific or -enhanced expression are known, including the class I patatin promoter (Bevan *et al.*, *EMBO J.* 8: 1899-1906 (1986); Jefferson *et al.*, *Plant Mol. Biol.* 14: 995-1006 (1990), both of which are herein incorporated by reference in its entirety), the promoter for the

potato tuber ADPGPP genes, both the large and small subunits, the sucrose synthase promoter (Salanoubat and Belliard, *Gene*. 60: 47-56 (1987), Salanoubat and Belliard, *Gene*. 84: 181-185 (1989), both of which are incorporated by reference in their entirety), the promoter for the major tuber proteins including the 22 kd protein complexes and
 5 proteinase inhibitors (Hannapel, *Plant Physiol.* 101: 703-704 (1993), herein incorporated by reference in its entirety), the promoter for the granule bound starch synthase gene (GBSS) (Visser *et al.*, *Plant Mol. Biol.* 17: 691-699 (1991), herein incorporated by reference in its entirety), and other class I and II patatins promoters (Koster-Topfer *et al.*, *Mol Gen Genet.* 219: 390-396 (1989); Mignery *et al.*, *Gene*. 62: 27-44 (1988), both of
 10 which are herein incorporated by reference in their entirety).

Other promoters can also be used to express a fructose 1,6 biphosphate aldolase gene in specific tissues, such as seeds or fruits. The promoter for β -conglycinin (Chen *et al.*, *Dev. Genet.* 10: 112-122 (1989), herein incorporated by reference in its entirety) or other seed-specific promoters such as the napin and phaseolin promoters, can be used.

15 The zeins are a group of storage proteins found in maize endosperm. Genomic clones for zein genes have been isolated (Pedersen *et al.*, *Cell* 29: 1015-1026 (1982), herein incorporated by reference in its entirety), and the promoters from these clones, including the 15 kD, 16 kD, 19 kD, 22 kD, 27 kD, and gamma genes, could also be used. Other promoters known to function, for example, in maize, include the promoters for the
 20 following genes: *waxy*, *Brittle*, *Shrunken 2*, Branching enzymes I and II, starch synthases, debranching enzymes, oleosins, glutelins, and sucrose synthases. A particularly preferred promoter for maize endosperm expression is the promoter for the glutelin gene from rice, more particularly the Osgt-1 promoter (Zheng *et al.*, *Mol. Cell Biol.* 13: 5829-5842 (1993), herein incorporated by reference in its entirety). Examples of promoters suitable
 25 for expression in wheat include those promoters for the ADPglucose pyrophosphorylase (ADPGPP) subunits, the granule bound and other starch synthases, the branching and debranching enzymes, the embryogenesis-abundant proteins, the gliadins, and the

glutenins. Examples of such promoters in rice include those promoters for the ADPGPP subunits, the granule bound and other starch synthases, the branching enzymes, the debranching enzymes, sucrose synthases, and the glutelins. A particularly preferred promoter is the promoter for rice glutelin, Osgt-1. Examples of such promoters for barley
 5 include those for the ADPGPP subunits, the granule bound and other starch synthases, the branching enzymes, the debranching enzymes, sucrose synthases, the hordeins, the embryo globulins, and the aleurone specific proteins.

Root specific promoters may also be used. An example of such a promoter is the promoter for the acid chitinase gene (Samac *et al.*, *Plant Mol. Biol.* 25: 587-596 (1994),
 10 the entirety of which is herein incorporated by reference). Expression in root tissue could also be accomplished by utilizing the root specific subdomains of the CaMV35S promoter that have been identified (Lam *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 86:7890-7894 (1989), herein incorporated by reference in its entirety). Other root cell specific promoters include those reported by Conkling *et al.* (Conkling *et al.*, *Plant Physiol.*
 15 93:1203-1211 (1990), the entirety of which is herein incorporated by reference).

Additional promoters that may be utilized are described, for example, in U.S. Patent Nos. 5,378,619, 5,391,725, 5,428,147, 5,447,858, 5,608,144, 5,608,144, 5,614,399, 5,633,441, 5,633,435, and 4,633,436, all of which are herein incorporated in their entirety. In addition, a tissue specific enhancer may be used (Fromm *et al.*, *The*
 20 *Plant Cell* 1:977-984 (1989), the entirety of which is herein incorporated by reference).

Constructs or vectors may also include, with the coding region of interest, a nucleic acid sequence that acts, in whole or in part, to terminate transcription of that region. For example, such sequences have been isolated including the Tr7 3' sequence and the nos 3' sequence (Ingelbrecht *et al.*, *The Plant Cell* 1:671-680 (1989), the entirety
 25 of which is herein incorporated by reference; Bevan *et al.*, *Nucleic Acids Res.* 11:369-385 (1983), the entirety of which is herein incorporated by reference), or the like.

A vector or construct may also include regulatory elements. Examples of such include the Adh intron 1 (Callis *et al.*, *Genes and Develop. 1*:1183-1200 (1987), the entirety of which is herein incorporated by reference), the sucrose synthase intron (Vasil *et al.*, *Plant Physiol.* 91:1575-1579 (1989), the entirety of which is herein incorporated by reference) and the TMV omega element (Gallie *et al.*, *The Plant Cell 1*:301-311 (1989), the entirety of which is herein incorporated by reference). These and other regulatory elements may be included when appropriate.

A vector or construct may also include a selectable marker. Selectable markers may also be used to select for plants or plant cells that contain the exogenous genetic material. Examples of such include, but are not limited to, a neo gene (Potrykus *et al.*, *Mol. Gen. Genet.* 199:183-188 (1985), the entirety of which is herein incorporated by reference) which codes for kanamycin resistance and can be selected for using kanamycin, G418, etc.; a bar gene which codes for bialaphos resistance; a mutant EPSP synthase gene (Hinchee *et al.*, *Bio/Technology 6*:915-922 (1988), the entirety of which is herein incorporated by reference) which encodes glyphosate resistance; a nitrilase gene which confers resistance to bromoxynil (Stalker *et al.*, *J. Biol. Chem.* 263:6310-6314 (1988), the entirety of which is herein incorporated by reference); a mutant acetolactate synthase gene (ALS) which confers imidazolinone or sulphonylurea resistance (European Patent Application 154,204 (Sept. 11, 1985), the entirety of which is herein incorporated by reference); and a methotrexate resistant DHFR gene (Thillet *et al.*, *J. Biol. Chem.* 263:12500-12508 (1988), the entirety of which is herein incorporated by reference).

A vector or construct may also include a transit peptide. Incorporation of a suitable chloroplast transit peptide may also be employed (European Patent Application Publication Number 0218571, the entirety of which is herein incorporated by reference). Translational enhancers may also be incorporated as part of the vector DNA. DNA constructs could contain one or more 5' non-translated leader sequences which may serve to enhance expression of the gene products from the resulting mRNA transcripts. Such

sequences may be derived from the promoter selected to express the gene or can be specifically modified to increase translation of the mRNA. Such regions may also be obtained from viral RNAs, from suitable eukaryotic genes, or from a synthetic gene sequence. For a review of optimizing expression of transgenes, see Koziel *et al.*, *Plant*
 5 *Mol. Biol.* 32:393-405 (1996), the entirety of which is herein incorporated by reference.

A vector or construct may also include a screenable marker. Screenable markers may be used to monitor expression. Exemplary screenable markers include a β -glucuronidase or uidA gene (GUS) which encodes an enzyme for which various chromogenic substrates are known (Jefferson, *Plant Mol. Biol. Rep.* 5: 387-405 (1987),
 10 the entirety of which is herein incorporated by reference; Jefferson *et al.*, *EMBO J.* 6: 3901-3907 (1987), the entirety of which is herein incorporated by reference); an R-locus gene, which encodes a product that regulates the production of anthocyanin pigments (red color) in plant tissues ((Dellaporta *et al.*, *Stadler Symposium* 11:263-282 (1988), the entirety of which is herein incorporated by reference); a β -lactamase gene (Sutcliffe *et al.*,
 15 *Proc. Natl. Acad. Sci. (U.S.A.)* 75: 3737-3741 (1978), the entirety of which is herein incorporated by reference), a gene which encodes an enzyme for which various chromogenic substrates are known (e.g., PADAC, a chromogenic cephalosporin); a luciferase gene (Ow *et al.*, *Science* 234: 856-859 (1986), the entirety of which is herein incorporated by reference) a xylE gene (Zukowsky *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)*
 20 80:1101-1105 (1983), the entirety of which is herein incorporated by reference) which encodes a catechol dioxygenase that can convert chromogenic catechols; an α -amylase gene (Ikata *et al.*, *Bio/Technol.* 8:241-242 (1990), the entirety of which is herein incorporated by reference); a tyrosinase gene (Katz *et al.*, *J. Gen. Microbiol.* 129:2703-2714 (1983), the entirety of which is herein incorporated by reference) which encodes an
 25 enzyme capable of oxidizing tyrosine to DOPA and dopaquinone which in turn condenses to melanin; an α -galactosidase, which will turn a chromogenic α -galactose substrate.

Included within the terms “selectable or screenable marker genes” are also genes which encode a scriptable marker whose secretion can be detected as a means of identifying or selecting for transformed cells. Examples include markers which encode a secretable antigen that can be identified by antibody interaction, or even secretable enzymes which can be detected catalytically. Secretable proteins fall into a number of classes, including small, diffusible proteins detectable, *e.g.*, by ELISA, small active enzymes detectable in extracellular solution (*e.g.*, α -amylase, β -lactamase, phosphinothricin transferase), or proteins which are inserted or trapped in the cell wall (such as proteins which include a leader sequence such as that found in the expression unit of extension or tobacco PR-S). Other possible selectable and/or screenable marker genes will be apparent to those of skill in the art.

Methods and compositions for transforming a bacteria and other microorganisms are known in the art (see for example Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Second Edition, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., (1989), the entirety of which is herein incorporated by reference).

There are many methods for introducing transforming nucleic acid molecules into plant cells. Suitable methods are believed to include virtually any method by which nucleic acid molecules may be introduced into a cell, such as by *Agrobacterium* infection or direct delivery of nucleic acid molecules such as, for example, by PEG-mediated transformation, by electroporation or by acceleration of DNA coated particles, etc. (Pottyskus, *Ann. Rev. Plant Physiol. Plant Mol. Biol.* 42:205-225 (1991), the entirety of which is herein incorporated by reference; Vasil, *Plant Mol. Biol.* 25: 925-937 (1994), the entirety of which is herein incorporated by reference. For example, electroporation has been used to transform maize protoplasts (Fromm *et al.*, *Nature* 312:791-793 (1986), the entirety of which is herein incorporated by reference).

Other vector systems suitable for introducing transforming DNA into a host plant cell includes but is not limited to binary artificial chromosome (BIBAC) vectors

(Hamilton *et al.*, *Gene* 200:107-116, (1997), the entirety of which is herein incorporated by reference, and transfection with RNA viral vectors (Della-Cioppa *et al.*, *Ann. N.Y. Acad. Sci.* (1996), 792 (Engineering Plants for Commercial Products and Applications), 57-61, the entirety of which is herein incorporated by reference.

- 5 Technology for introduction of DNA into cells is well known to those of skill in the art. Four general methods for delivering a gene into cells have been described: (1) chemical methods (Graham and van der Eb, *Virology*, 54:536-539 (1973), the entirety of which is herein incorporated by reference); (2) physical methods such as microinjection (Capecchi, *Cell* 22:479-488 (1980), electroporation (Wong and Neumann, *Biochem.*
- 10 *Biophys. Res. Commun.*, 107:584-587 (1982); Fromm *et al.*, *Proc. Natl. Acad. Sci. USA*, 82:5824-5828 (1985); U. S. Patent No. 5,384,253; and the gene gun (Johnston and Tang, *Methods Cell Biol.* 43:353-365 (1994), all of which the entirety is herein incorporated by reference; (3) viral vectors (Clapp, *Clin. Perinatol.*, 20:155-168 (1993); Lu *et al.*, *J. Exp. Med.*, 178:2089-2096 (1993); Eglitis and Anderson, *Biotechniques*, 6:608-614 (1988), all
- 15 of which the entirety is herein incorporated by reference); and (4) receptor-mediated mechanisms (Curiel *et al.*, *Hum. Gen. Ther.*, 3:147-154 (1992); Wagner *et al.*, *Proc. Natl. Acad. Sci. USA*, 89:6099-6103 (1992), all of which the entirety is herein incorporated by reference).

- Acceleration methods that may be used include, for example, microprojectile
- 20 bombardment and the like. One example of a method for delivering transforming nucleic acid molecules to plant cells is microprojectile bombardment. This method has been reviewed by Yang and Christou, eds., *Particle Bombardment Technology for Gene Transfer*, Oxford Press, Oxford, England (1994), the entirety of which is herein incorporated by reference). Non-biological particles (microprojectiles) that may be
- 25 coated with nucleic acids and delivered into cells by a propelling force. Exemplary particles include those comprised of tungsten, gold, platinum, and the like.

A particular advantage of microprojectile bombardment, in addition to it being an effective means of reproducibly, and stably transforming monocotyledons, is that neither the isolation of protoplasts (Cristou *et al.*, *Plant Physiol.* 87:671-674 (1988), the entirety of which is herein incorporated by reference) nor the susceptibility of *Agrobacterium* infection is required. An illustrative embodiment of a method for delivering DNA into maize cells by acceleration is a biolistics g-particle delivery system, which can be used to propel particles coated with DNA through a screen, such as a stainless steel or Nytex screen, onto a filter surface covered with corn cells cultured in suspension. Gordon-Kamm *et al.*, describes the basic procedure for coating tungsten particles with DNA (Gordon-Kamm *et al.*, *Plant Cell* 2: 603-618 (1990), the entirety of which is herein incorporated by reference). The screen disperses the tungsten nucleic acid particles so that they are not delivered to the recipient cells in large aggregates. A particle delivery system suitable for use with the present invention is the helium acceleration PDS-1000/He gun which is available from Bio-Rad Laboratories (Bio-Rad, Hercules, California)(Sanford *et al.*, *Technique* 3:3-16 (1991), the entirety of which is herein incorporated by reference).

For the bombardment, cells in suspension may be concentrated on filters. Filters containing the cells to be bombarded are positioned at an appropriate distance below the microprojectile stopping plate. If desired, one or more screens are also positioned between the gun and the cells to be bombarded.

Alternatively, immature embryos or other target cells may be arranged on solid culture medium. The cells to be bombarded are positioned at an appropriate distance below the macroprojectile stopping plate. If desired, one or more screens are also positioned between the acceleration device and the cells to be bombarded. Through the use of techniques set forth herein one may obtain up to 1000 or more foci of cells transiently expressing a marker gene. The number of cells in a focus which express the

exogenous gene product 48 hours post-bombardment often range from one to ten and average one to three.

In bombardment transformation, one may optimize the prebombardment culturing conditions and the bombardment parameters to yield the maximum numbers of stable transformants. Both the physical and biological parameters for bombardment are important in this technology. Physical factors are those that involve manipulating the DNA/microprojectile precipitate or those that affect the flight and velocity of either the macro- or microprojectiles. Biological factors include all steps involved in manipulation of cells before and immediately after bombardment, the osmotic adjustment of target cells to help alleviate the trauma associated with bombardment, and also the nature of the transforming DNA, such as linearized DNA or intact supercoiled plasmids. It is believed that pre-bombardment manipulations are especially important for successful transformation of immature embryos. In another alternative embodiment, plastids can be stably transformed. Methods disclosed for plastid transformation in higher plants include the particle gun delivery of DNA containing a selectable marker and targeting of the DNA to the plastid genome through homologous recombination (Svab *et al.*, *Proc. Natl. Acad. Sci. (U.S.A.)* 87:8526-8530 (1990); Svab and Maliga, *Proc. Natl. Acad. Sci. (U.S.A.)* 90:913-917 (1993); Staub and Maliga, *EMBO J.* 12:601-606 (1993); U.S. Patents 5,451,513 and 5,545,818, all of which are herein incorporated by reference in their entirety).

Accordingly, it is contemplated that one may wish to adjust various aspects of the bombardment parameters in small scale studies to fully optimize the conditions. One may particularly wish to adjust physical parameters such as gap distance, flight distance, tissue distance, and helium pressure. One may also minimize the trauma reduction factors by modifying conditions which influence the physiological state of the recipient cells and which may therefore influence transformation and integration efficiencies. For example, the osmotic state, tissue hydration and the subculture stage or cell cycle of the

recipient cells may be adjusted for optimum transformation. The execution of other routine adjustments will be known to those of skill in the art in light of the present disclosure.

Agrobacterium-mediated transfer is a widely applicable system for introducing
 5 genes into plant cells because the DNA can be introduced into whole plant tissues, thereby bypassing the need for regeneration of an intact plant from a protoplast. The use of *Agrobacterium*-mediated plant integrating vectors to introduce DNA into plant cells is well known in the art. See, for example the methods described (Fraley *et al.*, *Biotechnology* 3:629-635 (1985); Rogers *et al.*, *Meth. In Enzymol.*, 153:253-277 (1987),
 10 both of which are herein incorporated by reference in their entirety. Further, the integration of the Ti-DNA is a relatively precise process resulting in few rearrangements. The region of DNA to be transferred is defined by the border sequences, and intervening DNA is usually inserted into the plant genome as described (Spielmann *et al.*, *Mol. Gen. Genet.*, 205:34 (1986), the entirety of which is herein incorporated by reference).

15 Modern *Agrobacterium* transformation vectors are capable of replication in *E. coli* as well as *Agrobacterium*, allowing for convenient manipulations as described (Klee *et al.*, *In: Plant DNA Infectious Agents*, T. Hohn and J. Schell, eds., Springer-Verlag, New York, pp. 179-203 (1985), the entirety of which is herein incorporated by reference. Moreover, recent technological advances in vectors for *Agrobacterium*-mediated gene
 20 transfer have improved the arrangement of genes and restriction sites in the vectors to facilitate construction of vectors capable of expressing various polypeptide coding genes. The vectors described have convenient multi-linker regions flanked by a promoter and a polyadenylation site for direct expression of inserted polypeptide coding genes and are suitable for present purposes (Rogers *et al.*, *Meth. In Enzymol.*, 153:253-277 (1987), the
 25 entirety of which is herein incorporated by reference). In addition, *Agrobacterium* containing both armed and disarmed Ti genes can be used for the transformations. In

those plant strains where *Agrobacterium*-mediated transformation is efficient, it is the method of choice because of the facile and defined nature of the gene transfer.

A transgenic plant formed using *Agrobacterium* transformation methods typically contains a single gene on one chromosome. Such transgenic plants can be referred to as being heterozygous for the added gene. More preferred is a transgenic plant that is homozygous for the added structural gene; *i.e.*, a transgenic plant that contains two added genes, one gene at the same locus on each chromosome of a chromosome pair. A homozygous transgenic plant can be obtained by sexually mating (selfing) an independent segregant transgenic plant that contains a single added gene, germinating some of the seed produced and analyzing the resulting plants produced for the gene of interest.

It is also to be understood that two different transgenic plants can also be mated to produce offspring that contain two independently segregating added, exogenous genes. Selfing of appropriate progeny can produce plants that are homozygous for both added, exogenous genes that encode a polypeptide of interest. Back-crossing to a parental plant and out-crossing with a non-transgenic plant are also contemplated, as is vegetative propagation.

Transformation of plant protoplasts can be achieved using methods based on calcium phosphate precipitation, polyethylene glycol treatment, electroporation, and combinations of these treatments. See for example (Potrykus *et al.*, *Mol. Gen. Genet.*, 205:193-200 (1986); Lorz *et al.*, *Mol. Gen. Genet.*, 199:178, (1985); Fromm *et al.*, *Nature*, 319:791,(1986); Uchimiya *et al.*, *Mol. Gen. Genet.*:204:204, (1986); Callis *et al.*, *Genes and Development*, 1183,(1987); Marcotte *et al.*, *Nature*, 335:454, (1988), all of which the entirety is herein incorporated by reference).

Application of these systems to different plant strains depends upon the ability to regenerate that particular plant strain from protoplasts. Illustrative methods for the regeneration of cereals from protoplasts are described (Fujimura *et al.*, *Plant Tissue*

Culture Letters, 2:74,(1985); Toriyama *et al.*, *Theor Appl. Genet.* 205:34. (1986); Yamada *et al.*, *Plant Cell Rep.*, 4:85, (1986); Abdullah *et al.*, *Biotechnology*, 4:1087, (1986), all of which the entirety is herein incorporated by reference).

To transform plant strains that cannot be successfully regenerated from protoplasts, other ways to introduce DNA into intact cells or tissues can be utilized. For example, regeneration of cereals from immature embryos or explants can be effected as described (Vasil, *Biotechnology*, 6:397,(1988), the entirety of which is herein incorporated by reference). In addition, "particle gun" or high-velocity microprojectile technology can be utilized (Vasil *et al.*, *Bio/Technology* 10:667, (1992), the entirety of which is herein incorporated by reference).

Using the latter technology, DNA is carried through the cell wall and into the cytoplasm on the surface of small metal particles as described (Klein *et al.*, *Nature*, 328:70, (1987); Klein *et al.*, *Proc. Natl. Acad. Sci. USA*, 85:8502-8505, (1988); McCabe *et al.*, *Biotechnology*, 6:923, (1988), all of which the entirety is herein incorporated by reference). The metal particles penetrate through several layers of cells and thus allow the transformation of cells within tissue explants.

Other methods of cell transformation can also be used and include but are not limited to introduction of DNA into plants by direct DNA transfer into pollen (Zhou *et al.*, *Methods in Enzymology*, 101:433, (1983); Hess *et al.*, *Intern Rev. Cytol.*, 107:367, (1987); Luo *et al.*, *Plant Mol Biol. Reporter*, 6:165, (1988), all of which the entirety is herein incorporated by reference), by direct injection of DNA into reproductive organs of a plant (Pena *et al.*, *Nature*, 325:274, (1987), the entirety of which is herein incorporated by reference), or by direct injection of DNA into the cells of immature embryos followed by the rehydration of dessicated embryos (Neuhaus *et al.*, *Theor. Appl. Genet.*, 75:30, (1987), the entirety of which is herein incorporated by reference).

The regeneration, development, and cultivation of plants from single plant protoplast transformants or from various transformed explants is well known in the art

(Weissbach and Weissbach, *In: Methods for Plant Molecular Biology*, (Eds.), Academic Press, Inc. San Diego, CA, (1988), the entirety of which is herein incorporated by reference). This regeneration and growth process typically includes the steps of selection of transformed cells, culturing those individualized cells through the usual stages of embryonic development through the rooted plantlet stage. Transgenic embryos and seeds are similarly regenerated. The resulting transgenic rooted shoots are thereafter planted in an appropriate plant growth medium such as soil.

The development or regeneration of plants containing the foreign, exogenous gene that encodes a protein of interest is well known in the art. Preferably, the regenerated plants are self-pollinated to provide homozygous transgenic plants, as discussed before. Otherwise, pollen obtained from the regenerated plants is crossed to seed-grown plants of agronomically important lines. Conversely, pollen from plants of these important lines is used to pollinate regenerated plants. A transgenic plant of the present invention containing a desired polypeptide is cultivated using methods well known to one skilled in the art.

There are a variety of methods for the regeneration of plants from plant tissue. The particular method of regeneration will depend on the starting plant tissue and the particular plant species to be regenerated.

Methods for transforming dicots, primarily by use of *Agrobacterium tumefaciens*, and obtaining transgenic plants have been published for cotton (U. S. Patent No. 5,004,863, U.S. Patent No. 5,159,135, U.S. Patent No. 5,518,908, all of which the entirety is herein incorporated by reference); soybean (U. S. Patent No. 5,569,834, U. S. Patent No. 5,416,011, McCabe *et al.*, *Biotechnology* 6:923, (1988), Christou *et al.*, *Plant Physiol.*, 87:671-674 (1988), all of which the entirety is herein incorporated by reference); *Brassica* (U. S. Patent No. 5,463,174, the entirety of which is herein incorporated by reference); peanut (Cheng *et al.*, *Plant Cell Rep.* 15: 653-657 (1996), McKently *et al.*, *Plant Cell Rep.* 14:699-703 (1995), all of which the entirety is herein

incorporated by reference); papaya (Yang *et al.*, (1996), the entirety of which is herein incorporated by reference); pea (Grant *et al.*, *Plant Cell Rep.* 15:254-258, (1995), the entirety of which is herein incorporated by reference).

Transformation of monocotyledons using electroporation, particle bombardment, and *Agrobacterium* have also been reported. Transformation and plant regeneration have been achieved in asparagus (Bytebier *et al.*, *Proc. Natl. Acad. Sci. USA* 84:5345, (1987), the entirety of which is herein incorporated by reference); barley (Wan and Lemaux, *Plant Physiol* 104:37, (1994), the entirety of which is herein incorporated by reference); maize (Rhodes *et al.*, *Science* 240: 204, (1988), Gordon-Kamm *et al.*, *Plant Cell*, 2:603, (1990), Fromm *et al.*, *Bio/Technology* 8:833, (1990), Koziel *et al.*, *Bio/Technology* 11:194, (1993), Armstrong *et al.*, *Crop Science* 35:550-557, (1995), all of which the entirety is herein incorporated by reference); oat (Somers *et al.*, *Bio/Technology*, 10:1589, (1992), the entirety of which is herein incorporated by reference); orchardgrass (Horn *et al.*, *Plant Cell Rep.* 7:469, (1988), the entirety of which is herein incorporated by reference); rice (Toriyama *et al.*, *Theor Appl. Genet.* 205:34, (1986); Park *et al.*, *Plant Mol. Biol.*, 32: 1135-1148, (1996); Abedinia *et al.*, *Aust. J. Plant Physiol.* 24:133-141, (1997); Zhang and Wu, *Theor. Appl. Genet.* 76:835, (1988); Zhang *et al.*, *Plant Cell Rep.* 7:379, (1988); Battraw and Hall, *Plant Sci.* 86:191-202, (1992); Christou *et al.*, *Bio/Technology* 9:957, (1991), all of which the entirety is herein incorporated by reference); sugarcane (Bower and Birch, *Plant J.* 2:409, (1992), the entirety of which is herein incorporated by reference); tall fescue (Wang *et al.*, *Bio/Technology* 10:691, (1992), the entirety of which is herein incorporated by reference), and wheat (Vasil *et al.*, *Bio/Technology* 10:667, (1992), the entirety of which is herein incorporated by reference; U. S. Patent No. 5,631,152, the entirety of which is herein incorporated by reference.

Assays for gene expression based on the transient expression of cloned nucleic acid constructs have been developed by introducing the nucleic acid molecules into plant cells by polyethylene glycol treatment, electroporation, or particle bombardment

(Marcotte, *et al.*, *Nature*, 335: 454-457 (1988), the entirety of which is herein incorporated by reference; Marcotte, *et al.*, *Plant Cell*, 1: 523-532 (1989), the entirety of which is herein incorporated by reference; McCarty, *et al.*, *Cell* 66: 895-905 (1991), the entirety of which is herein incorporated by reference; Hattori, *et al.*, *Genes Dev.* 6: 609-618 (1992), the entirety of which is herein incorporated by reference; Goff, *et al.*, *EMBO J.* 9: 2517-2522 (1990), the entirety of which is herein incorporated by reference).

Transient expression systems may be used to functionally dissect gene constructs (*See generally*, Mailga *et al.*, *Methods in Plant Molecular Biology*, Cold Spring Harbor Press (1995)).

Any of the nucleic acid molecules of the present invention may be introduced into a plant cell in a permanent or transient manner in combination with other genetic elements such as vectors, promoters enhancers etc. Further any of the nucleic acid molecules of the present invention may be introduced into a plant cell in a manner that allows for over expression of the protein or fragment thereof encoded by the nucleic acid molecule.

Cosuppression is the reduction in expression levels, usually at the level of RNA, of a particular endogenous gene or gene family by the expression of a homologous sense construct that is capable of transcribing mRNA of the same strandedness as the transcript of the endogenous gene (Napoli *et al.*, *Plant Cell* 2: 279-289 (1990), the entirety of which is herein incorporated by reference; van der Krol *et al.*, *Plant Cell* 2: 291-299 (1990), the entirety of which is herein incorporated by reference). Cosuppression may result from stable transformation with a single copy nucleic acid molecule that is homologous to a nucleic acid sequence found with the cell (Proll and Meyer, *Plant J.* 2:465-475 (1992), the entirety of which is herein incorporated by reference) or with multiple copies of a nucleic acid molecule that is homologous to a nucleic acid sequence found with the cell (Mittlesten *et al.*, *Mol. Gen. Genet.* 244: 325-330 (1994), the entirety of which is herein incorporated by reference). Genes, even though different, linked to homologous

promoters may result in the cosuppression of the linked genes (Vaucheret, *C.R. Acad. Sci. III* 316: 1471-1483 (1993), the entirety of which is herein incorporated by reference).

This technique has, for example been applied to generate white flowers from red petunia and tomatoes that do not ripen on the vine. Up to 50% of petunia transformants that contained a sense copy of the chalcone synthase (CHS) gene produced white flowers or floral sectors; this was as a result of the post-transcriptional loss of mRNA encoding CHS (Flavell, *Proc. Natl. Acad. Sci. (U.S.A.)* 91:3490-3496 (1994)), the entirety of which is herein incorporated by reference). Cosuppression may require the coordinate transcription of the transgene and the endogenous gene, and can be reset by a

developmental control mechanism (Jorgensen, *Trends Biotechnol.* 8:340344 (1990), the entirety of which is herein incorporated by reference; Meins and Kunz, In: *Gene Inactivation and Homologous Recombination in Plants* (Paszkowski, J., ed.), pp. 335-348. Kluwer Academic, Netherlands (1994), the entirety of which is herein incorporated by reference).

It is understood that one or more of the nucleic acids of the present invention including those comprising SEQ ID NO:1 through SEQ ID NO:57264 or complement thereof or fragments of either or other nucleic acid molecules of the present invention may be introduced into a plant cell and transcribed using an appropriate promoter with such transcription resulting in the co-suppression of an endogenous protein.

Antisense approaches are a way of preventing or reducing gene function by targeting the genetic material (Mol *et al.*, *FEBS Lett.* 268: 427-430 (1990), the entirety of which is herein incorporated by reference). The objective of the antisense approach is to use a sequence complementary to the target gene to block its expression and create a mutant cell line or organism in which the level of a single chosen protein is selectively reduced or abolished. Antisense techniques have several advantages over other 'reverse genetic' approaches. The site of inactivation and its developmental effect can be manipulated by the choice of promoter for antisense genes or by the timing of external

application or microinjection. Antisense can manipulate its specificity by selecting either unique regions of the target gene or regions where it shares homology to other related genes (Hiatt *et al.*, *In Genetic Engineering*, Setlow (ed.), Vol. 11, New York: Plenum 49-63 (1989), the entirety of which is herein incorporated by reference).

5 The principle of regulation by antisense RNA is that RNA that is complementary to the target mRNA is introduced into cells, resulting in specific RNA:RNA duplexes being formed by base pairing between the antisense substrate and the target mRNA (Green *et al.*, *Annu. Rev. Biochem.* 55: 569-597 (1986), the entirety of which is herein incorporated by reference). Under one embodiment, the process involves the introduction
10 and expression of an antisense gene sequence. Such a sequence is one in which part or all of the normal gene sequences are placed under a promoter in inverted orientation so that the 'wrong' or complementary strand is transcribed into a noncoding antisense RNA that hybridizes with the target mRNA and interferes with its expression (Takayama and Inouye, *Crit. Rev. Biochem. Mol. Biol.* 25: 155-184 (1990), the entirety of which is herein
15 incorporated by reference). An antisense vector is constructed by standard procedures and introduced into cells by transformation, transfection, electroporation, microinjection, or by infection, etc. The type of transformation and choice of vector will determine whether expression is transient or stable. The promoter used for the antisense gene may influence the level, timing, tissue, specificity, or inducibility of the antisense inhibition.

20 It is understood that protein synthesis activity in a plant cell may be reduced or depressed by growing a transformed plant cell containing a nucleic acid molecule whose non-transcribed strand encodes a protein or fragment thereof.

 Antibodies have been expressed in plants (Hiatt *et al.*, *Nature* 342:76-78 (1989), the entirety of which is herein incorporated by reference; Conrad and Fielder, *Plant Mol. Biol.* 26: 1023-1030 (1994), the entirety of which is herein incorporated by reference).
25 Cytoplasmic expression of a scFv (single-chain Fv antibodies) has been reported to delay infection by artichoke mottled crinkle virus. Transgenic plants that express antibodies

directed against endogenous proteins may exhibit a physiological effect (Philips *et al.*, *EMBO J.* 16: 4489-4496 (1997), the entirety of which is herein incorporated by reference; Marion-Poll, *Trends in Plant Science* 2: 447-448 (1997), the entirety of which is herein incorporated by reference). For example, expressed anti-abscisic antibodies reportedly
 5 result in a general perturbation of seed development (Philips *et al.*, *EMBO J.* 16: 4489-4496 (1997)).

Antibodies that are catalytic may also be expressed in plants (abzymes). The principle behind abzymes is that since antibodies may be raised against many molecules, this recognition ability can be directed toward generating antibodies that bind transition
 10 states to force a chemical reaction forward (Persidas, *Nature Biotechnology* 15:1313-1315 (1997), the entirety of which is herein incorporated by reference; Baca *et al.*, *Ann. Rev. Biophys. Biomol. Struct.* 26:461-493 (1997), the entirety of which is herein incorporated by reference). The catalytic abilities of abzymes may be enhanced by site directed mutagenesis. Examples of abzymes are, for example, set forth in U.S. Patent No:
 15 5,658,753; U.S. Patent No. 5,632,990; U.S. Patent No. 5,631,137; U.S. Patent 5,602,015; U.S. Patent No. 5,559,538; U.S. Patent No. 5,576,174; U.S. Patent No. 5,500,358; U.S. Patent 5,318,897; U.S. Patent No. 5,298,409; U.S. Patent No. 5,258,289 and U.S. Patent No. 5,194,585, all of which are herein incorporated in their entirety.

It is understood that any of the antibodies of the present invention may be
 20 expressed in plants and that such expression can result in a physiological effect. It is also understood that any of the expressed antibodies may be catalytic.

In addition to the above discussed procedures, practitioners are familiar with the standard resource materials which describe specific conditions and procedures for the construction, manipulation and isolation of macromolecules (e.g., DNA molecules,
 25 plasmids, etc.), generation of recombinant organisms and the screening and isolating of clones, (see for example, Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Press (1989); Mailga *et al.*, *Methods in Plant Molecular Biology*,

Cold Spring Harbor Press (1995), the entirety of which is herein incorporated by reference; Birren *et al.*, *Genome Analysis: Analyzing DNA*, 1, Cold Spring Harbor, New York, the entirety of which is herein incorporated by reference).

The nucleotide sequence provided in SEQ ID NO:1, through SEQ ID NO:57264
 5 or fragment thereof, or complement thereof, or a nucleotide sequence at least 90% identical, preferably 95%, identical even more preferably 99% or 100% identical to the sequence provided in SEQ ID NO:1 through SEQ ID NO:57264 or fragment thereof, or complement thereof, can be “provided” in a variety of mediums to facilitate use fragment thereof. Such a medium can also provide a subset thereof in a form that allows a skilled
 10 artisan to examine the sequences.

In one application of this embodiment, a nucleotide sequence of the present invention can be recorded on computer readable media. As used herein, “computer readable media” refers to any medium that can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as
 15 floppy discs, hard disc, storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media. A skilled artisan can readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a
 20 nucleotide sequence of the present invention.

As used herein, “recorded” refers to a process for storing information on computer readable medium. A skilled artisan can readily adopt any of the presently known methods for recording information on computer readable medium to generate media comprising the nucleotide sequence information of the present invention. A variety of
 25 data storage structures are available to a skilled artisan for creating a computer readable medium having recorded thereon a nucleotide sequence of the present invention. The choice of the data storage structure will generally be based on the means chosen to access

the stored information. In addition, a variety of data processor programs and formats can be used to store the nucleotide sequence information of the present invention on computer readable medium. The sequence information can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and

5 Microsoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. A skilled artisan can readily adapt any number of data processor structuring formats (e.g. text file or database) in order to obtain computer readable medium having recorded thereon the nucleotide sequence information of the present invention.

10 By providing one or more of nucleotide sequences of the present invention, a skilled artisan can routinely access the sequence information for a variety of purposes. Computer software is publicly available which allows a skilled artisan to access sequence information provided in a computer readable medium. The examples which follow demonstrate how software which implements the BLAST (Altschul *et al.*, *J. Mol. Biol.* 15 215:403-410 (1990)) and BLAZE (Brutlag *et al.*, *Comp. Chem.* 17:203-207 (1993), the entirety of which is herein incorporated by reference) search algorithms on a Sybase system can be used to identify open reading frames (ORFs) within the genome that contain homology to ORFs or proteins from other organisms. Such ORFs are protein-encoding fragments within the sequences of the present invention and are useful in

20 producing commercially important proteins such as enzymes used in amino acid biosynthesis, metabolism, transcription, translation, RNA processing, nucleic acid and a protein degradation, protein modification, and DNA replication, restriction, modification, recombination, and repair.

The present invention further provides systems, particularly computer-based

25 systems, which contain the sequence information described herein. Such systems are designed to identify commercially important fragments of the nucleic acid molecule of the present invention. As used herein, "a computer-based system" refers to the hardware

means, software means, and data storage means used to analyze the nucleotide sequence information of the present invention. The minimum hardware means of the computer-based systems of the present invention comprises a central processing unit (CPU), input means, output means, and data storage means. A skilled artisan can readily appreciate
 5 that any one of the currently available computer-based system are suitable for use in the present invention.

As indicated above, the computer-based systems of the present invention comprise a data storage means having stored therein a nucleotide sequence of the present invention and the necessary hardware means and software means for supporting and
 10 implementing a search means. As used herein, "data storage means" refers to memory that can store nucleotide sequence information of the present invention, or a memory access means which can access manufactures having recorded thereon the nucleotide sequence information of the present invention. As used herein, "search means" refers to one or more programs which are implemented on the computer-based system to compare
 15 a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequence of the present invention that match a particular target sequence or target motif. A variety of known algorithms are disclosed publicly and a variety of commercially available software for conducting search means are available and can be used in the
 20 computer-based systems of the present invention. Examples of such software include, but are not limited to, MacPattern (EMBL), BLASTIN and BLASTIX (NCBIA). One of the available algorithms or implementing software packages for conducting homology searches can be adapted for use in the present computer-based systems.

The most preferred sequence length of a target sequence is from about 10 to 100
 25 amino acids or from about 30 to 300 nucleotide residues. However, it is well recognized that during searches for commercially important fragments of the nucleic acid molecules

of the present invention, such as sequence fragments involved in gene expression and protein processing, may be of shorter length.

As used herein, “a target structural motif,” or “target motif,” refers to any rationally selected sequence or combination of sequences in which the sequences or sequence(s) are chosen based on a three-dimensional configuration which is formed upon the folding of the target motif. There are a variety of target motifs known in the art. Protein target motifs include, but are not limited to, enzymatic active sites and signal sequences. Nucleic acid target motifs include, but are not limited to, promoter sequences, cis elements, hairpin structures and inducible expression elements (protein binding sequences).

Thus, the present invention further provides an input means for receiving a target sequence, a data storage means for storing the target sequences of the present invention sequence identified using a search means as described above, and an output means for outputting the identified homologous sequences. A variety of structural formats for the input and output means can be used to input and output information in the computer-based systems of the present invention. A preferred format for an output means ranks fragments of the sequence of the present invention by varying degrees of homology to the target sequence or target motif. Such presentation provides a skilled artisan with a ranking of sequences which contain various amounts of the target sequence or target motif and identifies the degree of homology contained in the identified fragment.

A variety of comparing means can be used to compare a target sequence or target motif with the data storage means to identify sequence fragments sequence of the present invention. For example, implementing software which implement the BLAST and BLAZE algorithms (Altschul *et al.*, *J. Mol. Biol.* 215:403-410 (1990)) can be used to identify open frames within the nucleic acid molecules of the present invention. A skilled artisan can readily recognize that any one of the publicly available homology search programs can be used as the search means for the computer-based systems of the present

invention. Having now generally described the invention, the same will be more readily understood through reference to the following examples which are provided by way of illustration, and are not intended to be limiting of the present invention, unless specified.

5

Example 1

The cDNA library of the present invention designated LIB143, is prepared from *Zea mays* genotype DK604 (DEKALB, Dekalb, IL) 3 cm immature ear (megaspore) tissue. This library is prepared from seeds that are planted on a moist filter paper on a covered tray that is kept on the dark for 1 day until germination. The trays along with the moist filter paper, are moved to the bench top at 15hr daytime/9hr nighttime cycles and grown until they are 2 days post germination. The daytime temperature is -80 °F and the nighttime temperature is -70°F. Tissue is collected when the seedlings are 2 days old. At this stage, the coleorhiza has pushed through the seed coat and the primary root (the radicle) has just pierced the coleorhiza and is barely visible; the coleoptile has recently emerged from the seed coat. The seedlings are placed at 42 °C for 1 hour. After 1 hour heat shock, the seedlings are then immersed in liquid nitrogen and then crushed. The harvested tissue was then stored at -80°C until preparation of total RNA. SEQ ID NO: 1 through SEQ ID NO: 350 are from LIB143.

The cDNA library of the present invention designated LIB148, is prepared from *Zea mays*, genotype DK604 (DEKALB, Dekalb, IL) mature pollen. This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles.

The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. When the corn plant is beyond the V10 stage, ear shoots, which are ready for fertilization, are enclosed in a paper bag before silk emergence to withhold the pollen. 21 days after pollination, prior to pulling the ears out, the paper bag is shaken to collect the pollen. At this stage the pollen is mature pollen. The mature pollen is then immediately frozen in liquid nitrogen and then stored at -80C until RNA preparation. SEQ ID NO: 351 through SEQ ID NO: 5745 are from LIB148.

The cDNA library of the present invention designated LIB189, is prepared from *Zea mays* genotype RX601 (Asgrow, Des Moines, IA). This library is prepared from tissue harvested from field grown plants at Asgrow research stations. Leaves are harvested at anthesis from open pollinated plants in a field (multiple row) setting. The ear leaf from 10-12 plants is harvested and pooled and frozen in liquid nitrogen and then subsequently frozen at -80°C where they are stored until RNA preparation. SEQ ID NO: 5746 through SEQ ID NO: 8666 are from LIB189.

The cDNA library of the present invention designated LIB3059, is prepared from *Zea mays*, genotype RX601 (Asgrow, Des Moines, IA) pooled kernel tissue. The library is prepared from pooled kernel hybrid material that is harvested from field grown material at Asgrow research stations. Kernels at 12-15 DAP are sampled. Whole kernels from hand pollinated (controlled pollination) plants are harvested as whole ears and quickly frozen on dry ice. Kernels from each of 10-12 ears from each location are pooled and ground together in liquid nitrogen and then frozen at -80C until RNA preparation. SEQ ID NO: 8667 through SEQ ID NO: 13525 are from LIB3059.

The cDNA library of the present invention designated LIB3060, is prepared from *Zea mays* genotype DK604 (DEKALB, Dekalb, IL) senescing leaves. Corn seeds are planted at a depth of approximately 3 cm in soil into 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same growing media. Plants are watered daily before transplantation and

ca. three times a week after transplantation. Peters 15-16-17 fertilizer is applied ~ 3X per week after transplantation, at a strength of 150 ppm N, two to three times during the life time of the plant; from transplantation to flowering, a total of ~ 900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr daytime/9hr night-time cycles.

- 5 The daytime temperature is 80 °F and the nighttime temperature is 70°F. Lighting is provided by 1000 W sodium vapor lamps. Tissue is collected from mature corn plants at 40 days after pollination (40DAP). The leaves are collected at the position of two leaves below the ear leaf and this sample represents those genes expressed during onset and early stages of leaf senescence. The leaves are pooled and then immediately transferred to
- 10 liquid nitrogen container in which the pooled leaves are then crushed. The harvested tissues is then stored at -80 °C until preparation of total RNA. SEQ ID NO: 13526 through SEQ ID NO: 17429 are from LIB3060.

- The cDNA library of the present invention designated LIB3062, is prepared from *Zea mays* genotype H99 (Monsanto Corp. St. Louis, MO). This library is prepared
- 15 from tissue harvested from plants grown in a greenhouse. Corn ears are harvested from 8 weeks old plants. The husk is separated and frozen into liquid nitrogen and then stored at -80°C until RNA preparation. SEQ ID NO: 17430 through SEQ ID NO: 21965 are from LIB3062.

- The cDNA library of the present invention designated LIB3066, is prepared
- 20 from *Zea mays*, genotype H99 (Monsanto Corp. St. Louis, MO), immature anther tissue. Corn seeds are planted at a depth of approximately 3 cm in soil into 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same growing media. Plants are watered daily before transplantation and *ca.* three times a week after transplantation. Peters 15-16-17 fertilizer
 - 25 is applied ~ 3X per week after transplantation, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplantation to flowering, a total of ~ 900 mg Fe is added to each pot. Corn plants are grown in a green house in 15hr daytime/9hr night-

time cycles. The daytime temperature is 80 °F and the night time temperature is 70°F. Lighting is provided by 1000 W sodium vapor lamps. Developing anthers are dissected from 7 weeks old tassel. At this stage, which is prior to anthesis, immature anthers are green and still enclosed in the staminate spikelet. After dissection, the anthers are

5 immediately frozen in liquid nitrogen and then stored at -80 ° C until preparation of total RNA. SEQ ID NO: 21966 through SEQ ID NO: 26876 are from LIB3066.

The cDNA library of the present invention designated LIB3067, is prepared from *Zea mays*, genotype M017 (Illinois Foundation Seeds, Champaign, IL) kernel tissue. This library is prepared from seeds that are planted at a depth of approximately 3 cm in

10 soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is

15 added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. When the corn plant is beyond the V10 stage, ear shoots, which are ready for fertilization, are enclosed in a paper bag before silk emergence to withhold the pollen. 5-8 days after controlled pollination, the ears are

20 pulled out and then the kernels are plucked out of the ears. The harvested kernels are then immediately frozen in liquid nitrogen and then stored at -80°C until RNA preparation. This sample represents genes expressed early in kernel development, during periods of cell division, amyloplast biogenesis and early carbon flow across material to filial tissue. SEQ ID NO: 26877 through SEQ ID NO: 31387 are from LIB3067.

25 The cDNA library of the present invention designated LIB3068, is prepared from *Zea mays*, genotype M017 (Illinois Foundation Seeds, Champaign, IL) pollen germinating on H99 silks (Monsanto Corp., St. Louis, MO). This library is prepared

from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of ~900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. When the corn plant is beyond the V10 stage and the ear shoots which are ready for fertilization are at the silk emergence stage, the emerging silks are pollinated with an excess amount of pollen under controlled pollination conditions in the green house. 18 hours after pollination, the silks are removed from the ears and frozen on dry ice. The silks are then immediately frozen in liquid nitrogen and then stored at -80°C until RNA preparation. SEQ ID NO: 31388 through SEQ ID NO: 34965 are from LIB3068.

The cDNA library of the present invention designated LIB3069, is prepared from *Zea mays*, genotype H99 (Monsanto Corp., St. Louis, MO), ears harvested 18 hours after pollination with an excess of genotype MO17 (Illinois Foundation Seeds, Champaign, IL) pollen. Corn seeds are planted at a depth of approximately 3 cm in soil into 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same growing media. Plants are watered daily before transplantation and *ca.* three times a week after transplantation. Peters 15-16-17 fertilizer is applied ~ 3X per week after transplantation, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplantation to flowering, a total of ~ 900 mg Fe is added to each pot. Corn plants are grown in a green house in 15hr daytime/9hr night-time cycles. The daytime temperature is 80 °F and the night time temperature is 70°F. Lighting is provided by 1000 W sodium vapor lamps. When the

genotype H99 corn plant is beyond the V10 stage and ear shoots which are ready for fertilization are at the silk emergence stage, the immature ears are pollinated with an excess of genotype MO17 pollen under controlled pollination conditions in the greenhouse. Eighteen hours after pollination, the ears are removed and frozen in liquid nitrogen and then stored at -80 °C until preparation of total RNA. SEQ ID NO: 34966 through SEQ ID NO: 39602 are from LIB3069.

The cDNA library of the present invention designated LIB3075, is prepared from microspores which are harvested from *Zea mays*, genotype H99 (Monsanto Corp., St. Louis, MO) plants. Seeds are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. Microspores are from immature anthers that are dissected from 7 week old tassels. The tassels are cut using a scalpel blade on a glass slide covered with water. Microspores are released in the water and then recovered by centrifugation. The microspore suspension is immediately frozen in liquid nitrogen and stored at -80°C until RNA preparation. SEQ ID NO: 39603 through SEQ ID NO: 43298 are from LIB3075.

The cDNA library of the present invention designated LIB3076, is prepared from *Zea mays* genotype H99 (Illinois Foundation Seeds, Champaign, IL) 3 cm immature ear (megaspore) tissue. This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are

watered daily before transplantation and ~3 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr

5 day/9hr night cycles. The daytime temperature is 80 °F and the night temperature was 70 °F. Lighting is provided by 1000 W sodium vapor lamps. Ears are harvested from 7 week old plants and are approximately 2.5-3 cm long. Kernels are dissected away from cob, frozen in liquid nitrogen and stored at -80°C until preparation of RNA. SEQ ID NO: 43299 through SEQ ID NO: 46078 are from LIB3076.

10 The cDNA library of the present invention designated LIB3078, is prepared from *Zea mays*, genotype RX601 (Asgrow, Des Moines, IA), shoots harvested at 10 days after planting from plants which are grown in a greenhouse in a high CO₂ environment (~1000 ppm CO₂). Corn seeds are sterilized for 1 minute in a 10% Clorox solution, rolled in germination papers, and germinated in a 0.5 mM calcium sulfate solution for two days

15 at 30 °C. The seedlings are transplanted into a peat mix media in 3" peat pots at the rate of three seedlings per pot.. They are then placed in the greenhouse. Twenty pots are placed into a high CO₂ environment (~1000 ppm CO₂). The plants are hand-watered and lightly fertilized with Peters 20-20-20 liquid fertilizer. At 10 days after planting, the shoots are collected, placed in liquid nitrogen, and lightly ground by hand. The shoot

20 tissue is then stored at -80 °C until preparation of total RNA. SEQ ID NO: 46079 through SEQ ID NO: 50197 are from LIB3078.

The cDNA library of the present invention designated LIB3079, is prepared from *Zea mays*, genotype M017 (Illinois Foundation Seed, Champaign, IL) dissected kernels including the basal endosperm transfer region tissue. This library is prepared

25 from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3

times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime

5 temperature is 80 °F and the night temperature the night temperature was 70 °F.

Lighting is provided by 1000 W sodium vapor lamps. When plants are beyond the V10 stage, ear shoots, which are ready for fertilization, are enclosed in a paper bag before silk emergence to withhold the pollen. Kernels are harvested at 12 days after pollination and placed on wet ice for dissection. Kernels are cross sectioned laterally, dissecting just

10 above the pedicel region, including 1-2 mm of the lower endosperm and the basal endosperm transfer region. This pedicel and lower endosperm region containing the basal endosperm transfer layer is collected and frozen in liquid nitrogen. The tissue is then transferred to -80 °C until RNA preparation. SEQ ID NO: 50198 through SEQ ID NO: 54477 are from LIB3079.

15 The cDNA library of the present invention designated LIB3088, is prepared from *Zea mays* genotype H99 (Monsanto Corp., St. Louis, MO). This library is prepared from seeds that are planted at a depth of approximately 3 cm in soil 2"-3" peat pots containing Metro 200 growing medium. After 2-3 weeks growth, they are transplanted into 10" pots containing the same. Plants are watered daily before transplantation and ~3

20 times a week after transplanting. Peters 15-16-17 fertilizer is applied about 3X per week after transplanting, at a strength of 150 ppm N, 2-3 times during the life time of the plant; from transplanting to flowering, a total of -900 mg Fe is added to each pot. Corn plants are grown in the green house in 15hr day/9hr night cycles. The daytime temperature is 80 °F and the night temperature the night temperature was 70 °F. Lighting is provided by

25 1000 W sodium vapor lamps. Ears are harvested from 8 week old plants and are approximately 3.5-4.5 cm long. Kernels are dissected away from cob, frozen in liquid nitrogen and stored at -80°C until preparation of RNA. SEQ ID NO: 54478 through SEQ

ID NO: 57264 are from LIB3088.

Construction of plant cDNA libraries is well-known in the art and a number of cloning strategies exist. A number of cDNA library construction kits are commercially available. The Superscript™ Plasmid System for cDNA synthesis and Plasmid Cloning (Gibco BRL, Life Technologies, Gaithersburg, Maryland U.S.A.) is used, following the conditions suggested by the manufacturer.

Example 2

The cDNA libraries are plated on LB agar containing the appropriate antibiotics for selection and incubated at 37° for a sufficient time to allow the growth of individual colonies. Single colonies are individually placed in each well of a 96-well microtiter plates containing LB liquid including the selective antibiotics. The plates are incubated overnight at approximately 37°C with gentle shaking to promote growth of the cultures. The plasmid DNA is isolated from each clone using Qiaprep plasmid isolation kits, using the conditions recommended by the manufacturer (Qiagen Inc., Santa Clara, California U.S.A.).

The template plasmid DNA clones are used for subsequent sequencing. For sequencing the cDNA libraries of LIB143, LIB148, LIB189, LIB3059, LIB3060, LIB3062, LIB3066, LIB3067, LIB3068, LIB3069, LIB3075, LIB3076, LIB3078, LIB3079, and LIB3088, a commercially available sequencing kit, such as the ABI PRISM dRhodamine Terminator Cycle Sequencing Ready Reaction Kit with AmpliTaq® DNA Polymerase, FS, is used under the conditions recommended by the manufacturer (PE Applied Biosystems, Foster City, CA). The ESTs of the present invention are generated by sequencing initiated from the 5' end of each cDNA clone.

A number of sequencing techniques are known in the art, including fluorescence-based sequencing methodologies. These methods have the detection, automation and instrumentation capability necessary for the analysis of large volumes of sequence data.

Currently, the 377 DNA Sequencer (Perkin-Elmer Corp., Applied Biosystems Div., Foster City, CA) allows the most rapid electrophoresis and data collection. With these types of automated systems, fluorescent dye-labeled sequence reaction products are detected and data entered directly into the computer, producing a chromatogram that is

5 subsequently viewed, stored, and analyzed using the corresponding software programs. These methods are known to those of skill in the art and have been described and reviewed (Birren *et al.*, *Genome Analysis: Analyzing DNA*,¹ Cold Spring Harbor, New York, the entirety of which is herein incorporated by reference).

We claim:

1. A substantially purified nucleic acid molecule that encodes a maize protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 5746 through SEQ ID NO: 8666.4.

5 2. A substantially purified maize protein or fragment thereof, wherein said maize protein is encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 5746 through SEQ ID NO: 8666 .

3. A transformed plant having a nucleic acid molecule which comprises:

- 10 (a) an exogenous promoter region which functions in a plant cell to cause the production of a mRNA molecule;
- (b) a structural nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 5746 through SEQ ID NO: 8666 or complements thereof;
- 15 (c) a 3' non-translated sequence that functions in said plant cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of said mRNA molecule.

4. The transformed plant according to claim 3, wherein said structural nucleic acid molecule is a complement of any of the nucleic acid sequences of SEQ ID NO: 5746 through SEQ ID NO: 8666.

20

5. The transformed plant according to claim 4, wherein said plant is maize or soybean.

6. The transformed plant according to claim 4, wherein said plant is maize.

7. The transformed plant according to claim 4, wherein said plant is soybean.

Abstract

Expressed Sequence Tags (ESTs) isolated from maize are disclosed. The ESTs provide a unique molecular tool for the targeting and isolation of novel genes for plant protection and improvement. The disclosed ESTs have utility in the development of new strategies for understanding critical plant developmental and metabolic pathways. The disclosed ESTs have particular utility in isolating genes and promoters, identifying and mapping the genes involved in developmental and metabolic pathways, and determining gene function. Sequence homology analyses using the ESTs provided in the present invention, will result in more efficient gene screening for desirable agronomic traits. An expanding database of these select pieces of the plant genomics puzzle will quickly expand the knowledge necessary for subsequent functional validation, a key limitation in current plant biotechnology efforts.

Combined Declaration and Power of Attorney for Patent Application

Docket Number: 38-21(15454)B

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH PLANTS, the specification of which is filed herewith unless the following box is checked:

☐ was filed on ;
as United States Application Number ; and
was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application, which designated at least one country other than the United States listed below, and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Claimed

☐ Yes ☐ No

(Application No.)

(Country)

(Day/Month/Year Filed)

☐ Yes ☐ No

(Application No.)

(Country)

(Day/Month/Year Filed)

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I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or under § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56 that became available between the filing date of the prior application and the national or PCT international filing date of this application.

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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James F. Davis, Reg. No. 21,072
Thomas M. Dunham, Reg. No. 39,965
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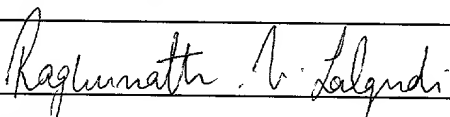
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Second inventor's signature		Date 9/13/99
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Citizenship		
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Combined Declaration and Power of Attorney for Patent Application

Docket Number: 38-21(15454)B

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Prior Foreign Application(s)

Priority Claimed

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(Day/Month/Year Filed)

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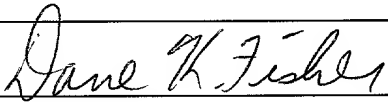
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<110> Fisher, Dane K.
Lalgudi, Raghunath V.

<120> NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH
PLANTS

<130> 38-21(15454)B

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<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C10

<400> 1

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ggcatccaaa actctgtcgg ttacgttcgc aa 92

<210> 2

<211> 121

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C11

<400> 2

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tgattcgatg gatgtgatgt taactcaaac atggtagcct ccaaggatag ctaaggagtc 120

a 121

<210> 3

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C2

<400> 3

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aagctcgggc atcatcctcg gttctgcgac caatagatgc ccgtcgtggt catgaagctg 120



atgtcatctc cagcgacaat gccagtgtca ggagcggcat gagggtgac tacagcggca 180
 caaaggaatc aaacatcgag atgaaacttt ctccacttca gaactcatac ccccaaagcc 240
 ttgcaagcca ggatgaatat gataccggca caccaaccgc aagcagtcta agcagtcagg 300
 tctacatcca caagcttgcc tctcactctc agttcagtgc agcgcctcgc cctgcgcctc 360
 ctgaaagatt tgtgccagct atggtacggc caccggttcc taccac 406

<210> 4
 <211> 377
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C3

<400> 4

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 agaaccataa gaggcctaag tgccaaattc ctgaggcaaa tcgtaatgac attgcaaadc 180
 aagcagatga tctagtagag tcaatggaat ctagggacac cattcctgat cgaaaacttc 240
 ttgcaagatt agttatagta agagaagaag ctcggaatat gatgggaggt ggcctgttag 300
 atgagagaaa tgatcgtggg ttgactaacc tccctgaggc agaggtaaac tttttgagca 360
 agctcgttgc tcttaaa 377

<210> 5
 <211> 249
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C4

<400> 5

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 ctacgtgtta tacatTTTTT tatgtccatg aaacattgat ccactgagaa aatatatctt 180
 caggtgccaa tctacgacaa aaaaggaaag aaaaaaagag aaaaaaaga gcaaaaggaa 240
 agaaaggag 249

<210> 6
 <211> 257
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C5

<400> 6

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 cgctccgctg tactacaaag gatggtatca cctgttctac cagtacaacc ccaagggccc 120
 cgtattgggc cacatccttt tggcccaatc cgtttcccc caacttatta aattggttgc 180
 coctgaaccc ggcatactaac ccaacatccc gttcgacaag ttccgcggcc ggtccggctc 240
 toggaacatt tcttaag 257

<210> 7
 <211> 401
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C6

<400> 7

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 ctacagacca cgaccgttc cacgccctcg acccgaacc cccaatcccg gacgcgaccg 120
 ctgaacccta gcatactccg gccatctgct gccggccccg gcgatcccc gccatggcct 180
 cccccgaggg cacaacgtgg gtcttcgact gtcccttat ggacgacctc gcggtcggcg 240
 ccgacttcgc ggcagcccc gcgggaggat ttttctgggc agcgccgccc tcgctgcagc 300
 cgcaggcgcc agtgcagtct gtcgttgccg cgtcggctcc caacccatgt atggaaatca 360
 gtagctctgt ggactgtggt caggaaaaag aacagccaac c 401

<210> 8
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C7

<400> 8

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ggcttcgcgg ttcatggcga tgtggagggc cgcgcgtagg cagctggtcg accgggcgct 180
cggctcaagg gccgcgcaca cgtctacagg cagcaaaaag atagtcgggg tggtctacaa 240
ggccggggag tatgccgaca agaaccccaa cttcgtcggc tgcgtcgagg gtgcactcgg 300
catccgcggc tggctcgagt cgcagggccca tcagtacatt gtcaccgatg acaaggaagg 360
ccccaactgt gaactggaga agcacattta agacatgcat gt 402

<210> 9
<211> 369
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-C9

<400> 9

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agaactaagc ccacgcgtcc gccacgcgt ccgaacttat gtgaccaata agatcaagct 120
ccagctcaac cgaagggtga gctcgagcca tggctaagat caccacaatg gccgcggcga 180
cggcgatcgc gcttgttctt ctaccgcgtc gccgcggcga ggagatgcc accgcagcgc 240
accgcacgg gctctctcc gagagccgc tcgctctgtc gccggctgct tacgacttct 300
tccaccccag agcgcgcgcc cgacgagctc acggcgtcgc gccggtgccg gcgctcgcgt 360
ctcacggac 369

<210> 10
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D10

<400> 10

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ccgaatctct cgggtggcgat ggcgctctcc gaccgctccc gcgagtcgct cctcccagac 120
ttctctacg cctcctcggc gcgctctttc gctgccacag gagccgccgc gcgcctccct 180

gtctcctccc cagcgctgc cacggctgga gcaggaggcg gcgtgccgtt ctcgatccag 240
 gcgccccagg agaagatcga gatgtactcg ccggccttct atgccgcctg cactgccgga 300
 ggaatcgcca gctgcgggct caccacatg gccgtcacgc ctctcgacct cgtcaagtgc 360
 aatatgcaaa atgacccaac gaaattccag gattatctca tcgggatttg gtat 414

<210> 11
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D11

<400> 11

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 ggtacctcaa gggcgtcgtc accgacgtca tccacgacct cggccgtggc gcgccgctcg 120
 ccaaggtcac tttccgccac ccattcaggt acaagcacca gaaggagctc tttgtcgcag 180
 ccgagggcat gtacacgggc cagttcgtct actgcggctg ccgcgccacc ctctccatcg 240
 gcaacgtgct gccctccgc gggatccctg agggtgccgt cgtctgcaac gtcgagcacc 300
 acgtcgggtga ccgcgggtgc ttcgccaggg cctctgggga ctacgccatt gtgattaagc 360
 aaaagccttg gacacgggac atcgaggatt aagctgccct ctggcgccaa gaagattgtc 420
 ccag 425

<210> 12
 <211> 352
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D12

<400> 12

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 gtgaaatttg tcatgaggaa tacaagccag gttacactgc gccacctcgt gttcagccag 120
 atgagacaac catagacatt gatggtgatt tggttatgga tttgcgagac ccaaggattc 180
 ttgctgtagc agctgccccaa catcgtcttc ttgaggcaga gtatgatggt tacgctagta 240
 cagatgctag tgggtgctgca ttctgccgtt cagctgcgct tattttaatg gcactgttgc 300

ttctaaggca tgcattgtct atgtcagaca acgaaggaaa cgatgatgac gc 352

<210> 13
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D2

<400> 13

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 gaagctgggc tgtcgggtgag ggacaatgaa ggatttggtt aaaataggtt ggatgctggt 120
 gttcttgatt tagttgatga tgaagcttct ggtatgcaag cgcagaaaac tcgatatacac 180
 tggatgaagg tggacaattg gagctatgtc agctacagtt attgatctgt gttcactttt 240
 gaaatactaa aataggaaag taactataca atgctgctaa cttgacaatc attgcatgaa 300
 agcatcatat gctagtgtc cgtgtttatt gctgccctag ccatccggat agtccatcgc 360
 ccgtcgtggg cctcgtggca catcctagat gttttgcccc gc 402

<210> 14
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D3

<400> 14

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 cgctggcgga caagcggctg ctcatcagct tcgcgccag gacgctctac ttcgacttcc 180
 tcaagcgcgt gggcgagctg ttcccgggcc cgtcaaaggc cagcgcgcc tacctgcacg 240
 ccgaggccga catcgaggac gcgctccgcc aggcgggctg gcgcgtcgt aaccgaggct 300
 tcatctccac gcagttctac ttcccaagc tcttcgacgc cgtgcccgtc ggctcctcga 360
 cgtagccgtg taggccgcc gccgtgtgcc tgtgtg 396

<210> 15
 <211> 392
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D5

<400> 15

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taggggtctac tattgttatt ggtgtagcca agggattgca aatgggaaaa atggtgtaaa 120

aacgctgcat attttttttt gcctaagcta cagctgtgct acagcaaatt ttgattaaaa 180

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaacaaaaa aaaaaaaaaa aaaaaaaaaa 300

aaaaaaaaa aaaaaaaaaa ggggggggcc cccaaggat tccaacgtta agtaccgcag 360

aaggaaagtg aaagaccccc aaaaggggcc cc 392

<210> 16

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D7

<400> 16

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agaaccatct aacaacaatt tttcctgagg ttaggttaaa gagatacctt gagatgagag 120

gtgctgatgg tggcccatgg aggagattgt gtgcgctgcc tgcatttttg gttgggctgc 180

tgtacgatga ggaatcatta caaagcattt tagacatgac ttttgactgg acacaggagg 240

aaagagagat gctaagacat aaggtaccgt tgactggtct gaagacacca tttcgcgatg 300

gatatgttag agatttagcc gaggaagttc taaaactggc caagaatgga ttggaaagaa 360

gaggatacaa ggaggtccgt ttc 383

<210> 17

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D8

<400> 17

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 ttgtttcatgt ttctttttacc cactttccgt taaaaaaga tgtcattagt gaggggagaa 120
 aagcaatacgc actgtttctgc agagaaccga agaattatgg aaattgaggt tatggcttaa 180
 aaaaaaagag attagaatgc gcagcatgca attaaaaggg cggccgctct agaggatcga 240

<210> 18
 <211> 423
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-D9

<400> 18

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 ctactacca tgcctaaaac cctagccccg atccgggtcga ggagcactac ttcttggcat 120
 ggcgggcacc cctagccagg caagcctcct gctccagaag cagctcaagg atcttgcgaa 180
 gaaccccggtg gatgggttct ccgcaggggt tgtagacgat agcaacgtct tcgagtggca 240
 ggtcaccatc atcgccccgc ccgacacctc atatgatgga ggctacttca atgcaataat 300
 gaccttcccc cagaactatc ccaacagccc gccatcagta agatttactt ctgggatgtg 360
 gcaatcgaat gggtaccggg atgggcttgt ttgcatttct attcttcac cacctggtga 420
 aga 423

<210> 19
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-E1

<400> 19

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 cctgccactg ccaggctgcc acaccgaggt gtcctcttga ctccctctcc tctcctcttc 120
 tcgcgcacgt ggtctgtgcc cgtacgcggc ggcgctgccg ctcaccagac cggccgccgc 180
 cacgtctgct tccgcgcctc cccgcctcct caccgtccgc ccccttttac ctgcctgatc 240
 attttattat aaatgtgggg cgagagaact catcataagc actggcatca aggtcatggt 300

acctcgggga attccaacaa caaaaagcat gataagcggc agccaaaatt tataaccagac 360
aattatagct ccgtcgatga gggtactact gctctg 396

<210> 20
<211> 312
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-E11

<400> 20

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tgctctacac tgaagtaaac atacataaaa acgtcaaagc gcatctatat aatcaacggg 120
agcgacttca caggccgatc atttttacaa tgtgctgcgc cgggacacca ctcggttat 180
gcaacgttgg cggcctctgc cacatacgcc tttgtcaagt tggagtaaca cctaagagcc 240
gtggacgggt cgtccatcgc gctagttgcg aaacctccgt cgttactctg agtcgcctc 300
gtgccggtcc at 312

<210> 21
<211> 389
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-E3

<400> 21

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agaaggaccc tggcgagagc gagagagggg gagaaaaggg gaaaaaaga ataataagaa 120
ggtgggaaga gcgagggagc tgcgtgcata acccagagcc agagggaggg agggaggtcc 180
cctgcagcac ccagcagtgt ccctgcaac tttgtttgaa gcaaaacaaa agtaccaggc 240
ttttttcggg ggagggggcg ttagatttcg ctcttcccc gaaaaaagcc tggtaacttt 300
tttcttcttc tttcttttgt aattttaacc ctttcttca tctttttttc ctggtgtaaa 360
gtaaacgtgg actttgtcgg tttatggac 389

<210> 22
<211> 364
<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-E5

<400> 22

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atggccccca agcgaggtgg cagggcgccg gtgccggcca agaagaagac ggataaagtg 120

acgaaccctc tattcgagaa gaggccgaag cagttcggca tcggcggcgc gttgccgccc 180

aagaaggacc tgcaccggtt cgtcaagtgg cccaaggctg tgcgtatcca gcggcagcgc 240

cgcacctca agcagcgcct caaggtacca cggcgctca accagttcac ccgcaccctc 300

gacaagaacc tcgctacgaa cctgtttaag atgcttctca agtaccggcc tgaagacaag 360

gctg 364

<210> 23

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-E6

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gagaagaaat atgagccac cattggtgtt gaagttcacc ctctggattt tagcactaac 120

tgtggcaaaa ttcgctttta ttgctgggac actgctgggc aagaaaagtt cgggtggcctt 180

agggatggct actacattca tggtcagtgt gccatcatta tgtttgatgt cacttctagg 240

ctgacataca agaattgtcc gacatggcac agggacctgt gcagggctctg tgagaacatc 300

cccattgttc ttgtggtaa caaggttgat gtcaagaaca ggcaagtcaa ggccaagcaa 360

gttacattcc aacggaag 378

<210> 24

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-001-Q1-E1-E8

<400> 24

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tctccgtang ggcttcgctc catagatttc gccgcaaggg gcaacggcac acccaccaac 120
tgacctgacc cacgagggat cgcgagatga agatcattcc ggtecccttg ctggatgaca 180
actatgccta cttaatcgtg gacgagagca ccaagaaggc agcgggccgtt gaccctgtgg 240
aaccggagaa ggttctcaag gcgggccggcg aggtcggcgc ctacgtcgac tgcgtttctca 300
ccacccatca ccactgggat catgctggtg gcaatgagaa gatgaggctg caggt 355

<210> 25
<211> 335
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-E9

<400> 25

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gagagacaga tacagatcgc gcgctcagat gtcgtcggac tctcgtcgt gggcgcgcg 120
cctgggtgcag atctcgccct acaccttctc cgccatcggc atcgccgtct ccatcggcgt 180
ctcggctctc ggcgcggcat ggggtatctt catcacgggg agcagcctca tcggggccgc 240
catcaaggcg cccaggatca catctaagaa cctcatcagt gtcattctt gtgaggctgt 300
tgcaatttat ggtgtaattg tggcaatcat cctcc 335

<210> 26
<211> 395
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F10

<400> 26

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ggaaggagat aatgagaagg ggggcactga agaggatgat gaacctgttg tagtagttgc 120
caaaatgtgg gagaacagca agtttgctga ctatgattca tctaaggaga aggacaatga 180
tggtgactca caggttgatt tggaatcaaa caagggggat gcaggtcttg acagcaatgg 240
gttgactca actaaggaga acagtggcag ggcacacca actaaacagc accagcagta 300

taagaagaag cctttgctga agagattcgg tggctctgcta aaaaagaaaa gcgaaaatta 360
gcataaaacc gtctgatgat aatccttggt ccaac 395

<210> 27
<211> 294
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F11

<400> 27

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aagggcctta aggagaaggt caaggagaag ctggcgggccc acaaggccca cgatgagggc 120
gaccaccacc agacgcccgc gccgcccgtg gtgggtggaca cgcattgctca ccaccaggag 180
ggagagcact tcccggcgcc ggcgcctctc ccgcacgtgg agacgcacca ccccgctcgtc 240
gtccacaaga tcgaggacga cgacacgaag attcagaccc caccacaggc accg 294

<210> 28
<211> 229
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F4

<400> 28

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aatggacaag ggcaaggcaa gagagaggcg tcctcgtttg atctgctgcc gcagtgcgaa 120
cacgaacacg aacatcatcg ccggagtttt aaagatgttc ctcatggact ggttcaacgg 180
ggtactggca ttccctgggc ttgggcagga ggatgctaag atcctctgt 229

<210> 29
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F5

<400> 29

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gaggccaaaa gggaggggag agtgtcgtca tggcttccat tgtegtttcc aggagggccg 120
 ttctcttagt tcgcgtcttg gagaagctca tcgcagcgtc ctccgtctcc gggactgggt 180
 ccgccctcag gccggtggca gtcgccggcg gcctccggcg ctacaacacc ggcgctccgc 240
 tccgacgcta cgaggggggc gagtcggaag acgatagcgt ccgcgagtac gatgggcggc 300
 acggcggccg ggactacgt gtgcccagcc tgtttctcaga tattttccgt gattcgctta 360
 ctgcgccgca cagcatttgg ccgccctg 388

<210> 30
 <211> 382
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F6

<400> 30

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 ggcgattcga ccccttctcc cttgacctct gggacccctt ccagggtctt cccttcgggt 180
 ctggaagcag cagcagcagc agcctgttcc cctcgttcgg aggcaccacc agctctgaga 240
 cgccgcctt cgccggcgct cgcgtcgact ggaaggagac gccggaggcg cacgtgttca 300
 agaccgacgt gccggggctg aagaaggagg aggtgaaggt ggagctggag gacggcaacg 360
 tgctccaaat tagccgggaa cg 382

<210> 31
 <211> 371
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F7

<400> 31

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 cgggaacgga cttctaactt agagagagcg cgggcgagag aggtcaaccg cagccggagg 180
 cgatggaggt ggtggcgctg gtgagcggcg gcaaggacag ctgcttcgcc atgatgcgat 240

gcatggacta cggccacaag gttgtcgctt tggctaattct tatccccctc gacgacaccg 300
 tcgatgagct cgacagctac atgtacaaaa ctgtggggca ccagattgtg gtgagctacg 360
 cgaaatgcat g 371

<210> 32
 <211> 342
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F8

<400> 32

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 cagaatgata ttctgagtc aacccttgat gatgctgtga atttactagg tgactactcg 180
 acatggttga gttctagcaa taccgcgaa gcaaattgat atttggagtg tttctgtgaa 240
 agatgggatg cactggttgc tccggaagaa agggctctgt tagatccaaa tgggcttgtt 300
 aatgaagggg agaaactcac cataaaggca ctggaaggct tc 342

<210> 33
 <211> 175
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-F9

<400> 33

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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa agaaaacaaa aaaaaaagat aaaaaacata 120
 aataaacata aataaaaaga taggaaatct gcgcgagggg caccaacttt cggtt 175

<210> 34
 <211> 389
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G1

<400> 34

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 gctggcgaac tggctggcga acccgccgcg caaccgctg gcgcgcctcc acatgcacgc 240
 cgtctcctcg cgcctcagga aatacggact gaggtacgac gacctctacg accctactt 300
 cgatctggac atcaaggaag cgctcggtag gctgcctagg gaggtggctg acgcccgcac 360
 ccagcgcctc aagcgtgcc tggacctct 389

<210> 35
 <211> 346
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G11

<400> 35

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 gtgggcatcg cgttcgcggt ggtgcagtgg gtgctggtct ccaaggtgcg ggtcaccccc 180
 gagcgcgcgg cggacggcgg ggccgtgaag agcggggcca gcgactacct catcgaggag 240
 gaggagggac tcaacgacca caacgtcgtc gtcaagtgcg ccgagatcca gaccgccatc 300
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<210> 36
 <211> 446
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G12

<400> 36

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 tggcatccca ctcaactaca ggcacatgga gggctttggt gtcaatacct acaccttgat 180
 caacagggat ggaaagcctc accttgtgaa attccattgg aagcctactt gtggtgtgaa 240

atgcttgctc gacaatgaag ctgtgactgt tggaggcacc tgccacagcc atgcgacgaa 300
 ggatctatat gattccatcg cagctgggaa ttaccctgaa tggaagctct acatccagac 360
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<210> 37
 <211> 374
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-G2
 <400> 37

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 gaacatctgg ctatgatgga gagagtctt ggacctttgc cgtaccatat gcttaagagg 180
 gcagatcggc actctgacaa atacatcaga aaaggacgcc tgaattggcc tgagggttgc 240
 acctcgctgg agagcatgaa agctgtgatg aaattgtcca ggcttcagaa tctggatgatg 300
 caaatgtgg accaggctgc gggagatttc attggtcttt tgcaagggtc cctgaagtat 360
 gaccaacaa gccg 374

<210> 38
 <211> 248
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-G4
 <400> 38

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 acccttcgcc ggggatgggc cacctggtct ccatgatcga gcttggcaag atcctcggcg 180
 cgcggggact gtccgtaata attgtcgtcg tcgagcctcc cttcaacacg ggcgtaccg 240
 cgcctttc 248

<210> 39
<211> 359
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G5

<400> 39

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gtgaggcgca gcaacgtggt cgaccccttc tccatggacc tctgggaccc cttcgacacc 180
atgttccgct ccacgtccc gtcggcgacc tccaccaact ccgagactgc cgccttcgcc 240
agcgcccgca tcgactggaa ggagacgccc gagggcgacg tgttcaaggc cgacctcccc 300
ggcgtcaaga aggaagaggt caaggtcgag gtcgagggac ggaacatgct ggcatcag 359

<210> 40
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G7

<400> 40

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acgcgctcgg ctccctggtc tgtcaccttg cggcggttcc cctccaccta gcatgcccgt 180
caggccctct cttcgccacc ctgccatgga gctcgtccca tgcccaacgc cggccaacct 240
cacttcccat ggtcgtccct tctccttcc tccctatggt cgacggcctc accttccatg 300
gcttccaaga tctgctcaac atccattcta gcgcgcaccc ctgcttccgt ttctggtgg 360
ccgacgcccc ctccctggaa ctgcgcc 388

<210> 41
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G9

<400> 41

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 gcagacgtcg tctccgaagc taccgcacaa gcagtactcc ttcgtgtcgg actccggaga 180
 ggagagcgat ccggataagc tgggtggagag cgtcttggac agcctgcaga aagcacgggg 240
 cggctcgaag ctgcacaact gagcgtctgc tgccatcgaa ttattgtttt tgcaacctaa 300
 cgagtcgtgc ttatgggtgtt ggccatggct gactgtcaag gacagcggcg cctgcaagca 360
 tcaacccgaa aaaactgttg attaaacctc gtcttttact tggactaggg cgtagtacaa 420
 tcgga 425

<210> 42
 <211> 260
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H1

<400> 42

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 gtctaccatt cccacgggtc ctccactacg tgaaccggtc cgcgccaccc gagagtacgg 120
 tactccacca tccagccaca tgccagggtg gtacacgccca ctcccgccat ctctccactc 180
 ccagtgcgcg attgtctttt cacatatgga gtagccgggt tcaggctttc ccatgacgag 240
 gtatgtgccg ctctagagga 260

<210> 43
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H10

<400> 43

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 tcgatacgct cacgaagatc aggaaccacc gtgggtctgcg tcactactgg ggctccgtg 180
 tccgtggaca tcacaccaag accactggca ggctggaaa aactgttggt gtctccaaga 240

agcgataagc tacatatcta tcgacaaatc tcagatgtac tagtggttggc tcatgttcaa 300
 actgtcttga ctaacgggtt ctggtgggac agtttcctga aattatgttt tgccctaggg 360
 taatcttgca gttatggaac ctt 383

<210> 44
 <211> 354
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-H11
 <400> 44

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 gaggaagatg ctgctggcca tgacaagctt cgacgacgac gacgctgccg cctcgccctc 180
 ggcacccggt catcacgccg atcctcacca gcaccaccag caccaccacc accaccacca 240
 ccacgcgggc aggcggcgat ggaaccggcg gcaggggacc attccaccac cgtcagatgc 300
 tggcgaggcc gaggcggctg acccgcgcta cggctctgac aagcggcctg gttc 354

<210> 45
 <211> 231
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-H2
 <400> 45

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 tcgggggtctg tcccgggccc atcgtggaac gcaagcccgt attcctgaac ctgggtcaagt 180
 tcaccacacc tagtgttgat cactaccccc tctcgtttca gggagtcctt a 231

<210> 46
 <211> 218
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-H3

<400> 46
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gcggcggtg atgtggagta gcgttgcttc gtcggcgggc ttgcctgggc caccagcggg 120
gagtcgctg agaatgcctt cgctcctac ggctagatcc tcgactccaa ggtcatcacc 180
gatcgggaca cggcgacgtc tcgcggttc ggcttcgt 218

<210> 47
<211> 402
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H4

<400> 47
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gccggcgtga agcactggcc accgggtgct gcacgtcaac ggccaacagg gggcaccgtg 180
caggtgggca gaaacagcca gcgacaacag tagggcacag ggatgtatat ggaccttcca 240
catacactag acttttgcaa gcaaccaaag atactctcag ataataagtt caatgaatca 300
aaaggaaaac tgggtgtctga tgagatcatc ataaatctgc tgtcaagacg cctggaagag 360
ggagaagaaa aggggtgaatt ggggttcac cttgatggct tt 402

<210> 48
<211> 385
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H6

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cccatcctcg gagtgaccgt tgcctacaac aaggatccca gcccgtgaa ggtcaacctc 180
ggggtcggcg cctaccggac cgaggaaggg aagcccctag tgctgaacgt ggtcaggcgc 240
gccgagcaaa tgttgatcaa taatccgtca cgtgtcaagg agtacctacc aatcaccggt 300

ctggctgaat tcaataagct gagcgctaag cttatctttg gcgctgacag ccctgctatt 360
caggagaata ggggtgctac cgtgc 385

<210> 49
<211> 337
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H7

<400> 49

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cgacgccaaag cccaaggccg ccaagcccaa ggcacccaag gccgcgcca agcccaagcc 120
ctcgccgaag gcgaaggcca agaccgctgc gaagcccaag gggcgctgc ccaagcccaa 180
ggccaaggcc aaggccaagg ccaaggccaa gcctgtcgt cctgccgccg cgtcgcccaa 240
gccccgcggg cgccctccca aggtcgccaa gacctcgcc aagggtccc ccgccaaggc 300
agccaagaag gccggtgctc ctgccaagaa ggggaag 337

<210> 50
<211> 384
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A4

<400> 50

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tggccactgc ctccccgtcg ctccgcttcc tcggcctgct caagcaagcc gacgacgcca 180
gctcccagtc ccacggtgct caggagctgg agctcgacta gcgcgacgtc gtctggctct 240
ccggcagcgc gacctcctcg tctcgacat ccgcggcctc ctgccgctcc ccgaccgct 300
ccccgagcgc cagcctcggg aggccgattt ccgccacgtc ccggccactt ctccgccggc 360
agcatggggc tgtccgcgct cctc 384

<210> 51
<211> 434

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-002-Q1-E1-A6
 <400> 51

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gccggcggtg acgccgcgac gccgaggtgg cgcattgtcg tgctggagaa cacgttcagc  120
gggttcgtgc agggcgccgg cgccgaagcc gtgttcgctg atgggtccct gttcagcccc  180
ttcctgttcg gcaagttctt tgaccagcc gaccggttcc cgctgtggga gttcagaccg  240
gacgtgctgc tcgccgcgct gcgccgcggc aacgccagga ccgccgtcga ctgggccgag  300
accgactccg agtactacct cacagcctac gtgccaggtg gaaggagatg cgacgtggag  360
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gacggccggg actg                                     434
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<210> 52
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 <213> Zea mays
 <223> Clone ID: LIB143-002-Q1-E1-A7
 <400> 52

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acaagaatcg gtcttgctgg ccttgcggtc atggggcaga accttgccct caacattgca  180
gagaaagggg tccccatctc tgtgtacaac aggacaacct ccaaggtgga cgagaccgtg  240
cagcgtgcca aggcagaagg aaaccttccc gtctacggct tccatgacct cgcgctcctt  300
gtgaactcca ttcagaagcc acgggtggtg atcatgctcg tcaaggccgg cgcgccagtt  360
gaccagacca tcgcgacgct cgcagctcac ttggagcagg gcgactgcat catcgaatgg  420
gggaacgag                                     429
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<210> 53
 <211> 406
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A8

<400> 53

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gccgcgatgg ggatcctcct ccggtccttc ctgctcgctt cgctcgtcct cagttcgctc 180
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aatgctagcc aacgggatat tcagaaagcc ttccacaaac tttctctaaa ataccaccct 300
gacaagaata aaggaaaggg cgcacaggaa aaatttgaag aaataaaciaa tgcataatgag 360
atcctatctg atgaagagaa gaggaiaaac tatgacctct acggggg 406

<210> 54

<211> 269

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A9

<400> 54

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gacctccgag acttcacccc gttcagcctc gtggacggtc tcgggagcgc gctgtcgag 180
gtggcggaga ccctgggccc cccgctggag cgctggcgc cgctcgggct gctgtcccg 240
aaggtgcccg aggacaaggc ccggtcccg 269

<210> 55

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B10

<400> 55

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cctgacctcc aacggcagcg cccaagccaa acagcttagc ttgctcggtt gccttcttct 180

ttggttatcc attatcatcc tgccgcgcgc gtttccggcg ttcttgtttg tttgtagagt 240
ggaggaggcg ctgccgcctt ctgtttttgt ttgagggtgg caatgtgcag accctacctg 300
tttggttggt ctgtgaaaaa aagttgctgt gggctgtgga aaaagatttt atcattattt 360
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<210> 56
<211> 206
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B3

<400> 56

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tctgaaaaca gttttgctat ttatttaaac aagctgctta attttatttt gatatttagt 180
ataattaata tttgttgact gacgtc 206

<210> 57
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B4

<400> 57

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<210> 58
<211> 80

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-005-Q1-E1-D7
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 gcttcccggg ggcctttctca 80

<210> 59
 <211> 446
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-005-Q1-E1-D8
 <400> 59
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 aatgacgtac aagcagcata ttaggtaaac taacaacatc aacctggcga catgaataag 180
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 ctcggtatgg gccagtggct ggtttagcat tatttaaagt tttgagaaat catcgtagtg 360
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<210> 60
 <211> 439
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-005-Q1-E1-D9
 <400> 60
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 cagcagacaa gatttcgata gcgacttcat cttcgggtgtt gcattctctg cttaccagat 180
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gaaaggtgga gccgatttgg gcaatggaga gactacttgt gactcatacc ggacttggca 300
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gtcaagaatc cttccaagat gaaagaggag taggggaatc aacgaagatg gtattaagta 420
ctacagcggg ctcatagat 439

<210> 61
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<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E1

<400> 61

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gttcgcgcgc tttgactgtc 140

<210> 62
<211> 72
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E10

<400> 62

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agtgctagac at 72

<210> 63
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E12

<400> 63

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aaatcgggtct cctgttcctg atccaaaatc caaaggagtg atttatggct tgacacttga 180

tacaagtgag aagcatttag ctcttctata cctagcaaca attcagggta ttgcttatgg 240
tactcgtcat attgtggagc attgtaatgc tcatggccac aagatagaca cacttcttgc 300
ttgtggggga cttgcaaaga attctctgta tatccaagag catgcagata ttacaggatg 360
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tggttgct 427

<210> 64
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E2

<400> 64

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cagatgccgc ggacgtgccc gctgaactac ggcgcgtctg cgttcgcgat gctggacgcc 180
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gccgccaacc ataccgcctt ctctcagcgc ttccgccaacg ccatggccaa gctcggccgc 360
atgtgcgtca ataccgccgc cgacggcgag gtccgccggg tatgca 406

<210> 65
<211> 438
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-005-Q1-E1-E3

<400> 65

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ggcggcgccg gcgccggcga ccagcggcca tgcgggtggc acccaggggtg ctcttcctcg 120
tccgcgacgc cgccgggtac ggcgctgccc tcgccgacgc gctccgcccg ccgccggggc 180
taacgagggg gtcctcgccc ttcgagctcc cccttgaaa gtacggcctc gacggagaga 240

aggcgtgcgc cgagctcctg agcttttccg attccagtgg ctctccacag gtgaccattt 300
 ttgttctgcc agactataag ccacctcttg cagcgtgtgt tgtaaagag gtcttggaac 360
 tgatttcttc tgaagctacc tccactgagc gaactctaata tgcncatac atcacaagat 420
 cgtcaagcta tcatcatg 438

<210> 66
 <211> 415
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB143-005-Q1-E1-E4
 <400> 66

cgcgctccga acgcatcggc caacccttcg gctttcagga aggcctgata aaaggaacaa 60
 attccttgaa acaagggccc aaggaacttc aattgcggtc aaaacaaaaa tgcggtcggc 120
 ccggaaaatg gccccccctg ggggtgcaatc cccccggac ccacggcaaa aaatgcgcaa 180
 cttcttgagg atgccttcaa tgcaaagtga atcagaagca gcctgcaatc atatcataga 240
 taaatttttg gtgcagttcc agcctcgcgt agtttatgga tgcagtgat aagtatacag 300
 gctgccctta tatagttcca tangagatag aaccctagct tatagtagat cattatatgt 360
 tttatgaatt gtgtaattag gtatctgctt tgcagtgagt ggctatatgg tttat 415

<210> 67
 <211> 418
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB143-005-Q1-E1-D4
 <400> 67

taagccatcc agttttccaa accgcacgtt cccgcacccc ctctcccggc cgtgcccgc 60
 gggtaatcca attggccggc cggttggtgc gggggcgtcc ttgaaggggc atcaanggag 120
 aaagggactc aacaacttca tccgcgacgt ccgcgacgaa ggatacttca natgccttct 180
 ggacgggaac cttttgcaaa cgaaaatcca caatattggc gcaacacttg taggagttga 240
 caagtttggt aacaaatatt atgagaaact acatgacact cagtatggaa ggcatangtg 300

ggtagaatat gcagagaaag gtcgttaciaa tgcataccaa gtgcctgctg aatggcatgg 360
atgggtgcac cacatcacag atagcaccgg ggataagctg ctgaaccaga agactgct 418

<210> 68
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B8

<400> 68

ccacgcgtcc ggatacttcg ctgcctgagg agtccccggc accggagggtc ttgctaccgg 60
ctggcggttt cttcttccgt tcttcccaa gtctcttcc cggaggaatc atgatcgtct 120
gcgtcgccgt tgcggccac cagaacaatc cgctgtacct gcagagcttc accggaggcg 180
acgacgccct caagctccac cacatcgtca actgctctct cgacgtcatc gacgagcgag 240
tgagcaatcc taagaggagt gcacctacat tgaatgagac atttttgggt cttctatacc 300
caactgagaa ctacaaagtg tatggctatt tgacaaacac aggggtcaaa tttatcatgg 360
tcacgactga tcttgatgtc aaagatgcag atgccccgaa tttt 404

<210> 69
<211> 441
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B9

<400> 69

acgcatccgc aatcttcaag aaagaagaag caaatagagc acacagtcga gtgtaaacca 60
tccaaccaat catggcttcg agttccagga gcaccgtgtt ttcacttctt ctcttggtgg 120
cgctgctgct cagctgcagc ggcatgagca gcgcggcgcg gttgctggaa gaggcgccgc 180
ccaaggagga gcaccacat cctgccgtgc cggagctgcc agaacctgag ctgccgccgc 240
accctaccga cgtcgtgccg cctgagctgc ccaaaccga gttaccaccg caccggccgc 300
ttgtccccga gctgccgaag cctgaggtgc ctcatcaggt gccggagcag ccgaagcccc 360
agctgccacc gcaccgaca gccgtccctg agtccccgaa acctgaggtg ccgcaccag 420
tgccggagct gcccaagccc g 441

<210> 70
 <211> 248
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-005-Q1-E1-C10

 <400> 70

 ccactcacgc aaccggaaat ctctatgggt tcttccatth gatcatactc ttgatagcga 60
 tgatgcaact gacctggcta ctatagthtt ctatggatgg ttcattcggc ctcttacata 120
 aggtatcgat tcagacatca tgctggaaga tgttgggtgat cggcttctac agttcactga 180
 aacataggcc gcacttgtca ctggtcacat attatthttt ttggtggcat gtattacgtc 240
 agtcaggt 248

<210> 71
 <211> 431
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-005-Q1-E1-C12

 <400> 71

 acacgcatcc ggagtgtttg tccatacgca ttggtctgaa tactgtagct actagcgcga 60
 gtgccactgt gccgcagctg cctgctcgcc attactgcaa gctgtgttca atcaaagctt 120
 aattaggctc cctctacatc tgatccagct aagtagctag ccagcactac agaagggcgt 180
 ggcaagaatc aggagagaga tagcaggggg gctagctagc tgagctcgtg cgacgaagaa 240
 tggccggaat tggcaggaac atggtggcgc cgctcctggt gctcaacctc atcatgtaca 300
 tcatcgatc cggttcgcg agctggaacc tgaaccactt catcaacggg cagaccaact 360
 accccggcgt ggccggcaac ggcgcgacgt tctacttctt ggtgttcgcc atcctggcgc 420
 gcgtggtggg c 431

<210> 72
 <211> 252
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-005-Q1-E1-C3

<400> 72

gctcctgctg gtgccgatgc tgaggctgct gctcctgctg gtcccgatgt gactcacatg 60
gccgctcatg acgcacccgc cgatgatgat gctgctgctg ctcgctcctgc tgggtgcagat 120
gagcccgccg cggtcgagcc ggtcgccgag gttcaggctg ctgctcacga agaactcgcc 180
gctgacgagc cgtgacgctc ctgctcatgc tggtcaccaa gagccctccg gttcaggcaa 240
gtgacgttgc tg 252

<210> 73

<211> 439

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-005-Q1-E1-C8

<400> 73

ccacgcgacc ggatagagggc cgaccaactt tgacgtggac agaggctgtg aagagagacc 60
tgaaggagtg gaatattgat aaagagctcg ccgcagatag gaaggggtgg aagtgtgcaa 120
ttcaggtgcc agaaccctga ttgatagttt cgcttttctt ccttaatcgt ttgacctttt 180
cttgtgtcca ttttagatct tgctggctct tgtgggtttt atctctttta tgtgtttccc 240
cgtttcgttg ttttcggttc tcctttgcct ttgtttccct tttctgttct ttgggggttg 300
agctctgagg ttttcatacg gggtttcac tctagcctac cccaacgtgc ttgggacaaa 360
aaggctttgt tgttgttgtt gttgttgttg ttgcatgaca cacttgagaa tgaatgtgtt 420
tctttctgtn tgctggtat 439

<210> 74

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C9

<400> 74

cccacgcac cggaaatcta tatggtttct tccatttgat cagagtctcg agagcaatga 60
tgcaactgac cgggctaataa tatttttcca tggatggatc atgcggcctc taacagaagg 120
tgtatattca gacatcatga gggaagatgt tggatgtagg ctccagatt tcaactgaaac 180

atatgccgca cttgtccatg gttcatatta tcttcttggc ctcagactat tacgtcactc 240
 attacgcccc ttagaatcat acgattgtgc cttcggacgt atacactgcc ttgatggact 300
 cacgcataac tctcacatca aattatgtat ctggtcattc tcttgggtcca ccgttcattg 360
 cacctagtta ctagtcccca aaaagcattt actacgtaat ggattacttc agaatacatt 420
 acggtgaccc tttaatatat gtcac 445

<210> 75
 <211> 296
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D1

<400> 75

cgcgtccgga agtgaactgg tgccgtgggc cacattcatc aggacggatg agacctgctg 60
 tcgtgcgtat gcgagcgtcg ataatacagg tgcttgggaa tagagcgata tcaatccagc 120
 tacgacgcta cttttcatct ttctgttct gcttcgggtcc actattttgt cttccatgat 180
 cttacatcgt aggtcgttgc aggtggcgcc aaagactttg gtgtaatcgt tgatctgtct 240
 ggaactggtc ctatcgtcgg acgtacgaga tttttgggtga tccaagggtga acctga 296

<210> 76
 <211> 236
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D10

<400> 76

ttgcagacct gaggggaagag attacttgcg aacgagaacg ttccactcag atgtacgcag 60
 agagatcgtt tcagcagga ggatttcgag agcgacttca tcttctgtgt tgcacgtct 120
 gcttaccaga tcgaccgtgg cagaggtcgt ggacttaacg tttgggatgg gttcactcac 180
 cgatacgcac agaaggggtg agctgagttg ggcaatggcg agaggaattg tgactc 236

<210> 77
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D11

<400> 77

ccacgcaccc gcaaaaactt gctcggcaaa ttcaggatgt tcttgcaactg tgtagtggca 60
gtttaccatc ttggtgttat cagctgacga aagcttgccc ttttctgttt cttttcgaaa 120
cacgaaggca atacttctat tccacagctt ttgggttgct tcgtgcactt catcgtcttc 180
agcaacaacc gggcaatgat aataaactg cttttgaaag agaagtcagg attggttagat 240
tgcaacgccca gaaagtccgt gtttctcgta accgtatctt ggattctgca gctaaagtta 300
tgtagatgtt ctctaataa aaggctgtcc tagaagtga atactttggt gaagttggaa 360
ctgggtcttg tccaactttg gagttttata ctctcttaag ccgtgagctg caaaggggtg 420
ac 422

<210> 78

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B6

<400> 78

ccacgcgtac gcacactgag acccgagatt aacgtctcag ctgaagcgcg cggcgcggtc 60
gaccgtgtcg gcaatgccgg ggcgcaccgt ggcggccggc gagacgcccg tgctgatgag 120
cggcgcaggg cagcagcga tggcgatggc caggctcacc aagatcggga tgctgttcgt 180
gcggtgccgc ggcggcatca gccactgcc ggaggagtcg gtgatggaca acgacgtgtg 240
ggcgcgggg ctcgcgtgt tcaacttcat cgaccagaac gcggtgtcag aagaactgga 300
tgccgggcag aacgtggtgg ctgtggcgct ggcggtggca gagtcgtgat ggttcggtgg 360
cgattctttt cagtgggagt aggcctgtag cctgcaactg tacataagac ttgttattac 420
attgca 426

<210> 79

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D2

<400> 79

gtccgggata attcaaagcc ttgtcccaaa tgcaaacggc ctattgaaaa aaatcaggga 60
tgcattgcaca tcacatgcac tccaccatgc aaatttgagt tctgctggct atgtcttggt 120
ccatgggtcag agcatggaga gaggactggg ggattttatg cttgtaaccg ctatgagtca 180
gcaaggcaag aaggagcgta tgatgaatct gaaaggagaa gagaaatggc aaagaactcc 240
cttgagagat acacacatta ttatgaacga tgggcagcca atcagtcgtc gaggcaaaag 300
gcactggggg accttcaaag cctacagaat gacaagcttg aaaggttaag tgacatacaa 360
agtcaacctg agtcacagct gaagttcatt gtagaggcat gggtacagat tgttgaatgc 420
agaagggtat tgaactggac 440

<210> 80

<211> 107

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D3

<400> 80

cttgtccctc ttgggtgctgg gtttgtgctg gttgtcgcgc ttgggtgctc gtcgcgtgct 60
ctcctccgtg gcttcttccg ttctgctggc tatgtcttgg tccctgg 107

<210> 81

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A12

<400> 81

catctccatc cccatcccggt gaccggtgca cgccgccgct tcaagtccta acaagccgca 60
tcgcacgcga tgcgtgtgct gtccgaccgc catctccgca gccggttggc ctagctacct 120
cacctcacct cagcaggga cactgcacac acacccatgg tgggtggcggc gatgcggcgg 180
ccgtgcgctg tgccagcgct gctggtggcg gcgacgctag tgcttctgct gctgctgctg 240
tcaccgtcga gcgcgcagcc gatgcggtcc ccggcgggcg cgccggggccc cgcgggcggg 300
accgggatcg actcggcgctg cctgaactcg ctgctcaaca tgcgggactg cctcccgctac 360

gtgagccagc ggagcacggc gcggcgcccc gacgcgccct gctgcccgga gctggcgggc 420
ctcgtc 426

<210> 82
<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A2

<400> 82

acgcgtccgt aaaaaactta taataagctt gagtagggac aatgcaattc ttctatttga 60
tagggagaca taacatgaga gaataattga agagggtagt acaattactt cattttctct 120
atcagaagat ggtgatttcc tgcttgtaaa tcttgtaagt gaagagattc atttgtggaa 180
cataagaaat gatcctgttc gagtcaaccg atacaatggc cataagcaca gccggtttgt 240
gataaggtct tgttttggcg gatctgagca ggcgttcatt gctagtggga gtgaagattc 300
acaggtctac atatggcata gagccactgg tgatctcatt gagactctcg ctggtcactc 360
gggcacagtc aactgcgtaa gttggaatcc tgtgaatccc cacatgctcg catcagcgag 420
cgacgatcac acagttcgta tat 443

<210> 83
<211> 354
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-005-Q1-E1-A3

<400> 83

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gcgccatgga tcgcgccgac cccgcgcggg gccgccttgc cgtgctctcc tcccacctcc 120
gtggtgcaag ggccgaagag gcngcagggc tggagaggte gccggtatcc gcgccggcgc 180
ccggggcccc cgccggcgcg cttgccgtgg tggactggag gaccgggaag cggcacgagg 240
tcaaggtctc cgaatacagc accgtgcgca ccaccgactt caagaacatt accactggaa 300
aggacgacaa tgggtcttaag atttatgac ctggttacct taacactgcc cctg 354

<210> 84
 <211> 428
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB143-005-Q1-E1-A4

<400> 84

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 ttccccgccg ctctagcctc ctccgccggg accgccgccg acgcgccacg gngaaggcct 120
 gcgggggatat tgggtaagca gttgtgatcc tgttctcttg ctgggatgcc gggttactat 180
 gacatcgatg acatcctcat ggaggatgag cctatttcag ttgttttcca agtaactgca 240
 aatggtgttg gcctgctaga tccgtgtgct gaaagtaact gtgtagacaa gggcgccaag 300
 gtggacctcc cattttggct tgcgcattgg ctgctgtctc tggaacaagc tgtgtcaata 360
 nccccacct ccattgcttca cacagaaaac ttggaaggag attcaagctg atgcggcctg 420
 tgtggatt 428

<210> 85
 <211> 447
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A5

<400> 85

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 aagaactaaa gatgggttcc tacttgggag ttgctgcagc ttctgctaac cctcctcact 120
 tcatccattt gtgctacaaa cccactgatg ggaacgtcaa gagaaagctg gctattgttg 180
 ggaaggggtt aacttttgac agtgggtggc acaacattaa gaccggggcca ggctgcagca 240
 tcgagctgat gaaatttgac atgggaggct ctgcagctgt atttgggtgca gctaaagctt 300
 tgggacaaat caagcctcct ggagtagagg ttactttat agtcgctgcc tgtgaaaata 360
 tgatcagtgg cacaggcatg aggcctgggt acattgtaac tgcttccaat gggaagacaa 420
 ttgaggtaaa taacactgac gcagaag 447

<210> 86
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-005-Q1-E1-A6

 <400> 86

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 cgagaatgga ggcggcgacg atggcggtga cggcggcggt ggtcggggcg gggctggtgt 120
 actggttcgt ctgggtgatg ggcgcagcgg aggtgaaggg caagcgggag gtggatctca 180
 agatgggatc catcacgcgg gacaaggtgc atgacaagta cacgcagtac tggtccttct 240
 tccgcgcgcc caacgagaca gccaccacag ctgcgtctgc tgagaatgtg ccggccttcg 300
 tcgacacctt ctacaacctc gtgaccgaca tctacgactg ggggtggggc cagtccttcc 360
 acttctcacc gtctctcgcc ggccgctctc accgcgacgc cacgcgcgtc cacgatgagc 420
 gcgtcgccga cctcctcggc g 441

<210> 87
 <211> 379
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-005-Q1-E1-A7

 <400> 87

 acagccaaga aaagcacata cccgagtcgc cgaacaaca acaatcccaa tccccctcg 60
 tcaactcaaaa ctcgagcaac aatgtcgctg attcgccgtg gaagcgcatt cgacccttc 120
 tccctcgacc tctgggacct cttccagggc tttcccttcg gctctggaag cagcagcagc 180
 agcagcctgt tccccctggt cggaggcacc accaccagct cggagacggc cgccttcgcc 240
 ggcgctcgcg tcgactggaa tgagacgccg gaggcgcacg tgttcaagac cgacgtgccg 300
 gggctgaaga aggatgaggt gaagggtggag ctggaggacg gcaacgtgct ccagattagc 360
 ggccagcgca gcaggagc 379

<210> 88
 <211> 270
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A8

<400> 88

ccacgcgtac ggagctacac catctatgca gttcttcac cctcgggaaga tgcgcctggg 60
tttaagctca gtgctttgat ctggcattac gatttctctc ccttcattgg tcttatcatt 120
gcgattctca atgacggtac tatcacgacc atctctaata acagagttaa gccatctcca 180
ttgcccagaca gttggcaact gaaggagatc tttgctacgg gcatcgtgct tggaagctac 240
cttgcctctta tgactgtcat tttcttctgg 270

<210> 89

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A9

<400> 89

ctcggtcctt tccatctcct agccgccgcc gccgccgccg cccaaaaccc tacctaccct 60
cttctcccc tcaactctct ttcattctca ttctaattgg gccccaaccc gtccggcgaa 120
gctgctagtg cttgtatcta ctatcttcat caggtaactt gcgacccctac tgaagtattc 180
cccgccgccg ctgccatggc caccctcaac cctttcgaac tctcggcgcc cgacgacaac 240
gacgaccctg cgctgttgat tgcggcgccg gcggctggct gctcagaaaa cccgagggaa 300
aaaagccggc cttgggcctg gctggaaagg tgcccaacct gccgggaaca acaagttccc 360
gaacaagccc ggtccttcc 379

<210> 90

<211> 274

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B1

<400> 90

cctacagtga gcaggagatc attataactc tcaacagacg gagcacagcg cagctacttg 60
ccacattcag tagctacaag gatcagttca ctcatgcaat caacaacgat ctgcaagctg 120
acccacaga ggagtttcgc tcatcactgc gggcaatcat cccgtgcttc acctgccag 180

acagatactt cgataaagtc agtcaacagg ctcttggagg catgggcact gaatacgatg 240
acgtcaccat ggtcgtaact acgcacaccg acgt 274

<210> 91
<211> 457
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B11

<400> 91

ccggggccac ccacgcatcc gcagaaactc tgtatagtct tggatatgaa aaaagtggag 60
cagttctgga ggaggaatca gggattatct tacataaccc tatggtgaaa cttttcagag 120
aacagggtgat tgatggaaat tgggataatg cgggtggttac catgaatata attggccttc 180
aagatgaaaa catcttgaaa tctgcggcat ttttgatatt ggagcaaaaa ttctttgaac 240
ttctaaaaaa tgacaatgtc atgggtgcta tgaagacttt acgatgtgag atcacacccc 300
ttggtgttaa tagaaaaaga gtgcatgaac tgtcgacttg tatgatttct tgttcttcac 360
agcagttggt ccttggtttt tcaaagcttg gaattgattc ttctagttca cggttgaagc 420
ttctagagga attgcagaag gtgcttcttc cagctgt 457

<210> 92
<211> 432
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB143-005-Q1-E1-B4

<400> 92

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ctcggccgaa cgccgtgcat tttttgccct gtccgttgta ccgtgtgcaa cgtaccccg 120
gccatctaga tcggtctcga tcacacatgc atatgatgct atgcaggcat tatataatgt 180
tagcagatga tgatctataa tgtagctga tgatggccgg ttttccatct gcatgcatgc 240
aggcagatga cgatcgagcg gatcggtggt gcagacgcca ccaaccccg cgcggcgacg 300
tgaaacacgg tgtcgattag cagggccggg tgggtggttg ttgtcccgtt cgcggggcaa 360

ccaacagcag cgggcagcgg cgcaaaggat cccatatacct atcctgacgg acgccgccca 420
tatatgtcat gt 432

<210> 93
<211> 445
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB143-005-Q1-E1-A10

<400> 93

ccacgcgata cggaacctcg ccgcgcgtctc atcgtcgtcg cccctattct ctccttcata 60
gtcccccccc atccgccgct gccacgcacc tcctccttct atctccttcc agacgcgggg 120
acgctcgccc acggcgggcg cggcagctga gtcctctgtc agtacgcttc tcgaggtgcg 180
cggactcacc gcatccgtga aggagactgg gcagcagatc ctgcgcggcg tcgacctcac 240
catccgcgat ggcgagattc atgcgattat gggaaaaaac ggctccggca agagcaccct 300
cacgaaagtt ctcgtaggcc atcctcatta tgacgtaact ggtggtaacca ttctcttcaa 360
gggtgaggac ctgnttgaca tggagccaga ggacagatct ctagcaggcc ttttcatgag 420
tttccaagca cctattgaga ttct 445

<210> 94
<211> 401
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB143-004-Q1-E1-G12

<400> 94

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ctcggcggct caaaacttct tctctcccaa tcggttctgc ctcggccaaa acagctcttg 120
gaaaccggct tggcaagcag ctatctgttg gcttcttgcc ttagccaaat gaagatcata 180
tgctcacga tctctctttt ttttgttcgg ctgaatctca gagaaaacgt cctgctccct 240
ccaccaggcc gccaggacgc aacgtttctc tctttttgat ctgctgtttt ttttcttga 300
atctggcgct agttccctgg cctagcgcag gcatgtcttt tcatttacca gagatggctg 360

gccgattatg gggcgctgtc tctaaccttt tanaacttgg a 401

<210> 95
<211> 110
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G4

<400> 95

acgcgtcggg cagagctcgc agataggggtc gacctgcatg agacgatata caccgcctag 60

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<210> 96
<211> 373
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB143-004-Q1-E1-H10

<400> 96

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acctttgctg gcaggccgcg aaccaaccaa acagctgaag tctgacgacg agccttggtt 120

cagagaaaca gggcactggg tttagagccc ttcggatcta gtattgtcgt tcaccggcgg 180

cgaccaggcc aaaccctaga accttgccaa gatgaggtcg ttgcgagcgg cgcagaccct 240

agtctcccgt tcccttttct cagcgcgcca tctaagcggc gcagcctccc ccgccacagc 300

cgccgcccgc ggcgcgcggt ggtgtgcagc gccggcgcca ccgccccgtt cgcgcgttcc 360

atcctcgatg gtg 373

<210> 97
<211> 202
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H12

<400> 97

gtccgcccac gcacccgcgc ttggccgcgc aaaacgggaa gtccgcaagg gttgttccgc 60

tggcctcaaa caaggtggtg ccccttttaa tgggaaccaa atataacca accgtggcct 120

ccaagctccg aatgaagggc ctcaaggccc tccccttgga gaacttttcc ccgaaactga 180
 aaacctccgg aacaacaatg gg 202

<210> 98
 <211> 277
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H6

<400> 98

cgcgctccaac acttgcttgc cttcgccctt tctgtctcgc ttcgtccgctc cttgtcccgg 60
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 gggtcggcgt gcttgctggt ctcctggctg gtgtttgcgg gttgtcctgt gccccttgctc 180
 cttcttcgtg gttttcctgt gcctgggctg tttctgcctt gcgctgtgtt ctgcttctct 240
 ttggctgtgg ttgtgtgtcc gggtggctg tctgttc 277

<210> 99
 <211> 390
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H9

<400> 99

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 agtgagttgg tgaagctgat tgatattctg aacccttcaa acaaacctgg aaggatcacc 120
 ataattacaa ggatgggggc agagaacatg aggggtgaagt tgcctcatct catccgtgct 180
 gttcgcaatg ctggactgat tgtcacatgg attactgatc ctatgcatgg aaacaccatc 240
 aaggccccctt gtggcctgaa gactcgcca tttgactcca ttctggctga agtgcggtgcc 300
 ttcttcgatg tgcattacca agaattgaagc caccctgggg gcgtccacct tgaaatgact 360
 gggcagaacg tgaccgagtg catcggtgga 390

<210> 100
 <211> 301
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-A1

<400> 100

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gttctcattg atcgcccttc tggacaaatc ttgtcagcac tgactgggtca ctggaagaag 180
gttacaagcg tagaatttgt aggcgactct gatcttgttt tgaatgggtc tgctcacaag 240
agagtcogta tctggcggca tcctgtggat gggaattatc cctgtgggta taccttgaat 300
g 301

<210> 101

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G10

<400> 101

cacacaccct gcacgacgca tccgacctcg ccatgtcagg cgcgcgacgg gtctacagaa 60
caacggcggg acctgcgtgg ccatcgccgg cgctgattac tgtgtcgtcg ctgcggacac 120
ccgcctctct gtaggataca gtatcctcac gcgtgatcac tccaagatct gcgacctggc 180
tgacaaatgt gtactggcat cttctggctt tcaaggatga attaaggctc tgcagaagaa 240
cctagctgcc agagaattgc tgtaccaaca ccagcataat aaaaggatga gctgccccgc 300
catggcacag ctctctcca atacctgta ctacaagcga ttcttcccat attacgcctt 360
caatgtgctc ggtgggcttg ac 382

<210> 102

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E3

<400> 102

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cctttttttg tctccgcttt actgtgttgc tcctatttaa atacgcctaa taataaatga 120

agtaaacaag taaccaattg gatcttttgt ccacgcacct taatttgcac gcacaagtct 180
aatggactt atataagtct atggaagagt atctactgtc aattttgtta taggcgaaac 240
cgcaaaacag actacagtac tgcacattgt tggtttatct tatcaacagg aagccggaac 300
agaaattgag cctatgggtg acctcaatac tgaagctgag aaaaaacttg gtcggcttgt 360
c 361

<210> 103
<211> 358
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E4

<400> 103

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gcctgctccc cttegcctgt gatcatgtct tgcagcagcg gcaagtgcga ctgtggctcc 120
agctgctcct gtggcagctc atgcaactgc atgtgcctta acgtggagac cgccgccgcc 180
agcaacatca ataccacggt cctcgccgcg ccgagcatca ctgccagcgc cggcggcttc 240
gaggcggcca ccgagggcgg cggtgcgac tgcagcacct gcaactgcgg caccaactgc 300
ggctgctcct gctgcagctg caactgacct tgtcatgcga tggcgcacga tagtctag 358

<210> 104
<211> 366
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-E9

<400> 104

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cgccgtgcgc ctacagctgg cgaaggtgaa ggaaggggtg gaggtcgcgc agctcgtgga 120
gaaggtggcc gcggccacc aggccgccgg ggacgccaaag gtgagcttcg gggagaactt 180
ttccccggcg cgggccaagg ggtaccagtt cgggatgggtg gcggtgttcg acagcgtgga 240
ggagctggac gccgtggaag gggacggcaa ggtggaggag gccaaaggcct cggtcaggcc 300

gctgctggac gaagtgatgg tcctggactt cgtcgtcgga gatgctccaa cgccccgcgag 360
cctctg 366

<210> 105
<211> 363
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F1

<400> 105

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gaatgggggg tttcgtgaag acccataaga ccaatgcgta tttcaaactgt ttccaagtga 120
aattcaagag aaggcgggct ggcaagacag actacagggc caggataagg ctgattaacc 180
aagacaaaaa caagtacaac acacccaaat acagatttgt tgtgcgattt accaacaagg 240
acatcactgc acaaatacata tctgctacta tagcgggtga tatggatctt gcttctgcct 300
actctcatga gttgccacga tatggtcttg aagttggtct gaccaactat gcagctgcct 360
act 363

<210> 106
<211> 379
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F11

<400> 106

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ctgccaaggg cagctcccc gacttcaaag catatgtgaa gattccttac agcgcgatgat 120
gtcaaactcg atccgtcatc cacatcgtat cgcgtcgttc tgcttgact ctgcttcttc 180
ctctatgtat taataatccc agcagcttga aataataaca atgcatgcat gcacccatga 240
tggaatttag aaataatggt tatgtcccca accacgccta cttatgctct cgagttactt 300
atttgctgct gtctctcaac tgcattgcta tgtaatatat atacaataaa agattctagc 360
taaaaaaaaa aaaagaaaa 379

<210> 107

<211> 394
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-F12

 <400> 107

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 gaacctttgc tggcaggccg cgaaccaacc aaacagctga agtctgacga cgagccttgg 120
 ttcagagaaa cagggcactg ggtttagagc ccttcggatc tagtattgtc gttcaccggc 180
 ggcgaccagg ccaaacccta gaaccttgcc aagatgaggt cgttgcgagc ggcgcagacc 240
 ctagtctctc gttccctttt ctacgcgcgc catctaagcg gcgcagcctc acccgccacg 300
 gccgccgccg cgggcgcgcg gtggtgtgca gcgcgggcgc caccgcccc ttcgccgctt 360
 ccatectcga tggatgatgcc tgccgggggt tccg 394

<210> 108
 <211> 355
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-F2

 <400> 108

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 ccgcaagggg tcttcgtacg ccgtcgcggc acttctcgcg ctgcctctg tcgccgccgt 120
 tgcaggggag gtcttcttcc aggagaagtt cgaagatggc tgggaaagtc ggtgggtcaa 180
 gtccgagtgg aagaaggatg agaacatggc tggatgaatg aaccacacct cgggaaaatg 240
 gaatggagat gccgaggaca aaggtattca aacctccgag gattacaggt tctatgccat 300
 ttcagccgaa taccctgagt tcagcaacaa ggataagacc ctggtgctgc agttc 355

<210> 109
 <211> 250
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-F5

 <400> 109

gttctctctgt ggggttggttt ggttggttgtt cgggtctctc tcggttttgc tcttttggct 60
 gttgtcttcg tcgttggtgt gttggccctg ccgggtttct ttggttggtgc gctcttggct 120
 gctttttggg gctcctctcc ttttggtctg gtgtcgggtg ttggtgtctc ctctgtggc 180
 tgtttgctc gtcgtgctgg gtgtcttgc ggtgggctgc tggtttcttc ctggggccgg 240
 cctttctctc 250

<210> 110
 <211> 230
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F8

<400> 110

acgcgtctag attggcggtc gcttcgttgt tctttggtgt ctggcggcct ttggtcctc 60
 gctccctctc tgtgtgcgc tttgctgtgc ggttgctctt gctcttcttg gtggacttcc 120
 ccagtctctc ccttgccgtt ttctatcacc ttgccggagt tttcgtcgtc gtgggtcttcg 180
 gtgcgcgctt gttcatcttt ctctgctgct tggtaggggtg tcctctgtcg 230

<210> 111
 <211> 338
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F9

<400> 111

aacatccatg aacatgaatg caatggtcca gtaatcttga aggttaactc ctgctgtagt 60
 cgggaccttt cagagaaagt cattggagtt tgctttgtag cacaagattt gaccaggcag 120
 aagatgatta tggataagta tactaggata caaggagact atgttgccat agtaaagaac 180
 cccactgagc tcatccctcc catatttatg attaatgatc ttggttcttg cttagagtgg 240
 aataaagcta tgcagaagat taccggtata aagagggaag atgcgataaa caaattgtta 300
 attggggagg tcttcacgct tcatgattaa tggctgta 338

<210> 112
 <211> 316
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E11

<400> 112

cacctcaggg aagctggcat gtcaaccttc attctcactg ctgaacttgc tgctgctcct 60

tcagcagttg gacgatgagg acaaactgca acaagtgtca aatgctctct cagagttcat 120

tcggaaagcc acggtggttt gcggagaatg agaaatgttg gagcggcgtg taggatcacc 180

gaatgcatag tacggctcca tacttctgct ctgtttctgc ctgtaactca actgtgaaaa 240

gttttaaact ttcagaaaga aaaaccgtga gaggtgcagg ttcaagttaa tatgaataat 300

aaagtgtttt tttatt 316

<210> 113

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C4

<400> 113

cgcggggtcgc accacgcgtc ggcccatcag ctacacaggcc ggccagccgat cgatcgagct 60

ccgcgggtcgc tagcacagcc ggccactgcg cagcagcgtg ctggtaggtt gcatgcactt 120

gcaggatggc gcatgtcgtc aagacgcttc gccttgtggc cctggtggtc gtgtcggcag 180

tggagctgtg ccgcgccatc gacttctacg agcgggacct gacatcggac tacgcgctgt 240

gggacctgta cgagcgggtg cacacgcaac accgggtgca ccggaaccac ggcgacaatg 300

ggcgccgggtt cgggagcttc aaggagaacg cgcgcttcat ccacgcgcac aacaagcgcg 360

<210> 114

<211> 288

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-C7

<400> 114

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gggggtggggc ttcttgttgt gtgocctcgtc tttggcgtgc tccttcctntt ggtctccttc 120

cgcgcccttc gtttttctgg gtcgctgctg cttgccgctg gtgtgcgctg tgctgcttcg 180
cctcttcttc tgtgtcttct cttggcttgc cctgttggtt gcgtcccgcg tggcgcgctt 240
cggctctctc gtgggtgcgcg tggttggtcc tccggtctct ttcttggc 288

<210> 115
<211> 257
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C9

<400> 115

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ttttcatggt gctcactt aattaattaa gttgctgcaa ttttcatcca ttttgaccga 120
atgtgaatat acttatcaag gaattctttg tatgatcttt aagaacgtgc gcattgtaag 180
atztatgtga cctctgtacg gcatagtata aggtagtttt gcgtggaaaa tcgacagtgc 240
ttactcaaaa ggtgctg 257

<210> 116
<211> 334
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D1

<400> 116

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atagcataaa atgattcttc aagtctttta actggtctca acagtgaaaa gtttttagaga 120
tggtgtgttg ttgggtctaa ctcaagatgg agatagtttt agcaaattct aatttttggt 180
atcatggcaa caccaagtaa tgatactagt aggatccaac aggtgattgg gacggtgaca 240
ctggaactta aaaataaggg tattgacatc aaaaatagta aaatactagt gatttttttt 300
gcagccagag aagcacaagt caaggatagt tatg 334

<210> 117
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D11

<400> 117

cccacgcgtt ccaccaagc gtccgaggac gcgtgggtcg gacgcgtggg gcgctgcgtc 60
cccatccaga accatcctcc gctcgacacc ttctctggca gatagcgtcg tcgtgtttac 120
cgcatcggtg ctcaccatgg cgctcgtagt gttgccggac ccattgccac cagatgggtca 180
cgacctcttc atagcttcac tccgtccatg gccgtcgccg ctggtgccac cctcccgcag 240
ctgtaactcc ctctcccttc ctcatctcac cgcaggcctc atcacgccct catcaccgat 300
cgttgctggg tctgccctct gttgctggag atcgtgacca tggaaactcg gcgtcgctcc 360
tagcgctcct cacgatgttg ctgctctagg gcgtcactct catgtc 406

<210> 118

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D2

<400> 118

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tcgcgtcttc gctgccgtgc ggcgcgtggg tcggccgaag cgggctcgtc cgcgcgcgcg 120
ccgccttctc cgggacacgg ccgcgtttcg cgggcgccag ggcgcagatc ggggcgcgcg 180
tgcttgccgt cgagcagttc cagcgcagga tggcaacca agctactgtg catgccttca 240
aggatattct gaccagctc cctaagcctg gaggtggtga atatggaaag ttctacagcc 300
ttcctgcact aaatgatcca aggattgata agctgccgta ctccatccgt attc 354

<210> 119

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D9

<400> 119

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tgctatgctg gaaactatga ctgtggccct aaacttcatg ttcattcatca ttctgtcttc 120

gtgtgctttt acagttcagt atgaatatct ggtcaggctt aaacttcaca atgtgttttt 180
atgtaatctc aaagttatgg tcttcaaaat agattgtttt aatattcttt tgcaataaag 240
ccatgggtatt ttcagtcgaa ctcttctcct ttaatacata ttagacatat atttgttttt 300
taatgtttat tcatttccaa acttcaacac ttacaagtta caccaccaca aagctctttt 360
gaacaatcat agaaatggta tttgtcattt gatggatcag atatgataac ccc 413

<210> 120
<211> 368
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E10

<400> 120

gcctgccaca ccaggaatcc cgtttaattt atttatgctc accaatttaa gggcagaact 60
tacggacctc aagctcttgg ttactcctga tcttctctag gcgactaggc acaattgccc 120
tctggcaaaa tgccatcagt ttatctttac atccctaaca ttatcgggta ttttaggatac 180
atcataaatt tcattgcatt tgcggtttgc tattccaaca aggctctctt tgctatcctg 240
tacttcatca gctttgtcct tgatggtgtg gatggttggg ttgcaaggaa gttcaatcaa 300
gcatcaacct ttggagctgt gttagacatg gttacagata gggtagcac tgcttgtttg 360
ttggccct 368

<210> 121
<211> 338
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A5

<400> 121

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aactacatcg atcatcagca gcgagccagc cggccgagcg agcagcaccg atggcggcgt 120
acatgcgcgt gacgcaccgc gacgaggaag gcaagaaggt gacggagaag atgccgggtcc 180
cggagacgcg gcgcccggac acggccaagc acttcgagcg caagctggag gagcagggcc 240
tccaccgctt cgagcggcac cggcggaacg cgccccgggg cgtgggcatc ggcgccccgc 300

cgcccaagtc cgggcgcggc ggcaagtaca cctgggag 338

<210> 122
<211> 273
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B10

<400> 122

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cgacctcacc gactacctca tgaagatcct gactgaacgc ggctactcct tcaccaccac 120
tgctgagcgg gaaattgtca gggacatgaa ggagaagctc gcctacattg ccttggaacta 180
cgaccaggag atggagactg ccaagaccag ctcttctgtt gagaagagct acgagctgcc 240
tgacggacag gtcacacca ttggtgctga gcg 273

<210> 123
<211> 379
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B11

<400> 123

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tccaacacag caacatgcag agcagcgatc cgacatccga tagatggacg cggatgatgtt 120
cgggctggag actccctga tggggcgct gcagcacctg ctggacgtgc ccgacggcga 180
cgccggcgcg ggcggcgaca acaagaccgg cagcggcggc agcgccacgc gcacctacgt 240
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cgcatctcgt gtggacatgc cggggctggg cagggcgac atccgggtgc acgtggaaga 360
ccatcgggtg ctggtggtc , 379

<210> 124
<211> 357
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B12

<400> 124

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ccacgcggaa gacaagaacc tcaaggccga ggactcagcg tgggagctga agaagaattc 180

ggcaacggcg tgagcaccat ggtcctcgtc tacaacgcca cgggggccag cctgagcctg 240

gtggacgacg ggaaagactg gatgggctcc gtctacagct cgccgatccc ggacaccttc 300

cacaacgggc agtggatcgc catcctccac gtcaagcccg gtcgctggc gcagggc 357

<210> 125
 <211> 366
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B4

<400> 125

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ggatggcgtc agcatcgacg gcggtgcgga tgctccccga cggcggcgct gacgacgagg 180

agcgggtggct cgccgagggc atcgccggcg tccagcagaa cgccttctac atgcaccgcg 240

ccctcgattc caacaacctc aaggacgcac tcaagtactc ggcgagatg ctctccgaac 300

tgcgcacctc gcgactatcg ccgcacaagt actacgagct gtacatgagg gcgtttgatg 360

agatga 366

<210> 126
 <211> 392
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB143-004-Q1-E1-C10

<400> 126

accacgctn ccacaccagn gctcgcttcg aggagctcaa tatggacttg ttccggaatt 60

gcatggaacc tgtggaaaag tgcttgcgcg acgccaagat ggacaaaagc agcgtgcacg 120

acgtcgtgct cgtcgggtggc tccacccgca tccccaaggt gcagcagctg ctgcaggact 180
tcttcaacgg aaaggaattg tgcaagagca tcaaccccgga cgaggctgtg gcgtacggcg 240
ccgctgtcca ggctgccatc ctccagcggcg agggcaacga aaaggtacaa gatctgctcc 300
tgctcgacgt cagccactg tctctcggcc tggagactgc aggtggcgtc atgacgggtgc 360
tgatcccgag gaacaccacc atcccgacca ag 392

<210> 127
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C11

<400> 127

gggcgagcgc ttgggcgagc gctatcatga ccggcggcac gctcaggttc atcggtctctg 60
gcgcagcacc gctcggcaag gacgtgatgg agggagtggc caagattttc cagaagctgt 120
gattgcccag ggttacggaa tgactgaaac ttgtgggatc atatctttag agtaccacaga 180
aaaaggacaa attcgtcaat ttggttcaac tggagcactt gtctcaggag ttgaagcaaa 240
aattgttgat gtagaaacat tgatatgtct gccaccaaat caactaggag aaatttgtgt 300
tcgaggaccg aacataatgc aagggtatct caacaatgtg caagctactg aatttacaat 360
caagcaaggg tggttgcata ctggtgat 388

<210> 128
<211> 344
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G4

<400> 128

cccgggccga aacacgcgtc caacgcagtg gaagaagcat atcgaggagt cgattgcggt 60
gacggaggtc cattcggagc agttgtcgtc tgtaatgacg aagtagtagt cagctgccat 120
aacatggttc tgaagcacac tgaccctact gcgcatgctg aagtaactgc aattagagag 180
gcttgcaaaa agcttgggaa aattgagctc tcagactgcg aaatttacgc gtcctgcgag 240
ccatgcccga tgtgctttgg tgcagttcat ctctcccgaa tcaagaggct ggtttatggg 300

gccaaaggcag aggctgccat cgccattgga tttgatgact tcat 344

<210> 129

<211> 69

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H10

<400> 129

gacccacacg tcaggtaacc tcaactcaga gggaatttgc acaaaccgct tcaatttggt 60

gaaaggggtt 69

<210> 130

<211> 104

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H12

<400> 130

gaagctacat tcctaaaacc atctgcttca gccttcagcg agccccaagt ttagtcggcc 60

gatcgattac tgaagtagta tggcctcgcc aagacggccc tcag 104

<210> 131

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H2

<400> 131

cgtccaacat aaggaccact caaagttcaa aagaaagggt gaagatctct tttatgagca 60

caccctgtct ctgaccgaag ctctatgtgg gttccaattt gttcttacac atctggacaa 120

caggcagctt ctgatcaaat caaaccgccg cgaagttggt aaacctgacg aattcaaggc 180

gagaaacgac taggggatgc ctatttacca gatgcccttc atgaacggga agctctacat 240

tcatttcaca gtggagttcc ccgactcgct ggcgccagag cagtgcgaagg ctctcgagtc 300

ggtacttccg ccaaagcctt cgtccaagc 329

<210> 132

<211> 417
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-G12

 <400> 132

 gacccacgag tccgctttga gaaagacagc tttttcagga acatccttat caggacgcat 60
 cacaatatac ctgagatact tctgagtaag atactccctg tcatgctgtc ctctgtcgag 120
 tctgcctcac ttgagtttcg atcagtagct gctctatcca taactgtttc gtgacatctg 180
 agtgcctaac ttactatcga cgacttgact atcattgtca tgctatctgc tgtcaatcat 240
 tgtgctacca gtgaatgtcc tatgcgacaa agtcatcagt atgagaaatc tcagtctgct 300
 gaatcagtgt ctgctcaa at tgttcatcaa gtagtatttc cacatgtagc aactgaatgt 360
 accgacactg atcgtacatt acgttactg atcatattat caatgctcat atcacao 417

<210> 133
 <211> 377
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-A11

 <400> 133

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 ggcgttgga atgttgatct ggcgaagaaa accaattacc tcctcgtcga caacaagacg 120
 acagttaa acaatcgagga cgcgttcaaa gaatttactg caagggagga tattgctatt 180
 gtgctcatca gtcagtatat tgccaacatg ataagatttc tggatgatag ctacaacaag 240
 ccagtccctg ctattctgga gatcccatcc aaggaccatc catatgatcc agcgacacgac 300
 tcggtgctgt ctgagtgaa gtatctcttc tctgcggaat cggatggcgtc tgataggcga 360
 tgaaggcatc cttgtgt 377

<210> 134
 <211> 287
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-A12

<400> 134

ggaggaggcg gaggggggatg ccatgggcaa ggacgtcgtg gtccagagcg gcgcgggcgg 60
cggggatttc gccgccaagg agtacactga cccgccgccg gcgccgctgg tggacgctgc 120
agagctgggt tcgtgggtctc tgtaccgcgc ggtgatcgcg gagttcatcg cgacgctgct 180
gttctctgtac gtgacgggtg cgacagtgat cgggtacaag caccagacgg acgcttctgc 240
gtctgcgtcg ggggccgggg ccgacgcgcg gtgccggcgc gtgggcg 287

<210> 135

<211> 258

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-A2

<400> 135

gtgcgtgcct tgggttgctg gtggcgtgtn gtgggcttgt gcgggtgctg cgcgcgggcc 60
cgggggcccc gctgggcgtt gcgtgcttgc tgggtggggg ggctgtgggg gggtttgttg 120
tggggggggc gtttgggcgc gtcgggtgcgc ctgtgctggt gcgtgtcgtg ggtcccttgg 180
tgacggcctt ggctggggct ggcggtggctg ctgggtggtg gcccgttgtt ggggttgctg 240
gctctggttc tcgtgttc 258

<210> 136

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A3

<400> 136

acgcgtcgga ccacgcgtcc gcccaagcgt ccgcccacgc gtccggttat gaagagtggc 60
aagtacactc tcggctacaa gaccgtcctc aggactctca ggaactctaa gtcgaagcta 120
gtgatcatcg ctaacaactg cccgccccctt cgtaagtctg aaattgagta ctatgctatg 180
ctggccaagg tcactgtcca ccacttccat ggaaacaatg tcgaccttgg aactgcctgt 240
ggtaaatact ttcgggtctg ctgcctcagc attattgatc ctggtgattc tgatatcatc 300
aagactacac cgggtgagca gtaaagaagc ccctgcagta gggggatc 348

<210> 137
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-E12

 <400> 137

 gacccacgag tcaacttaga gccaccaacc cgggatgcag cccactacgc gggaaatgca 60
 ggccatggcc gccgccggcc agcacatctc cctcgacgac ctccgcgcgg cagcaggcgg 120
 cgtgcacgac gacttcctgc accagatgcg cggaggcctg ccgccgtctg catggccgga 180
 actgtcgtcc gcggcaggag ggaaggcgcc ggatggcggc gcgcatgcgg agcacatgca 240
 gcaccagccg cagcactttg gtgggggtgc ggtcctgtac cagcattccg ccttgcctggc 300
 ctctcggctc cggcagcacc aaatcagcgg ccgccgtcgg gaggccgtga agcagatggt 360
 gctgcagcag cgggcctatc agaggcacga acaccatgtg ttgcttcagg gcaagggg 418

<210> 138
 <211> 332
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-E5

 <400> 138

 acgcgtcgac aacaggctgt tccaattagg cctgaagaaa tacggcaagg gggactggag 60
 gaacatatcg cgcaactacg tccagacgcg gacgcccacg caggtggcca gccacgcgca 120
 gaagtacttc atcaggctca actccggcgg caaggacaag aggaggcca gcatccacga 180
 catcaccacg gtgaacctga cggacgacga gcggggcgccc tcgccgtcgc ggtcctctct 240
 gatcaccacc accaccagcc atccaaacgc gccggctccg gccgcagtgg tgatacgcg 300
 tcccttctcg tcctcgtcgg cggcgggtggc cg 332

<210> 139
 <211> 371
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-E9

<400> 139

gcaatccact gagttctgtt tgttgagacg catagagcta gctgctagcg tcgacaatgt 60

cgctcgtgag gcgcagcaac gtgttcgacc ccttctcgat ggacctctgg gatcccttcg 120

acaccatgtt ccgctccatc gtcccgtcgg cgacctccac caactccgag actgccgcct 180

tcgccagcgc ccgcacgcac tggaaggaga cgcccagggc gcacgtcttc aaggccgacc 240

tccccggcgt caagaaggag gaggtcaagg tcgaggtcga agacggcaac gtgctgggtca 300

tcagcggcca gcgcagcagg gagaaggagg acaaggacga caagtggcac cgcgtcgagc 360

gcagcagtgg c 371

<210> 140

<211> 129

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F11

<400> 140

attccccgtc agaccacga atcaaggctg atgcccggag cgaacttgaa tccatcacac 60

tcgcgtcacc ttcatatgat gcaacatccg cgaatgcac tgtattgcaa aaatagacaa 120

atgcttcgc 129

<210> 141

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F2

<400> 141

ccgggccgat cacgcgtcgg cctatctctg aaactactgc tatttttgca ggtgttgatg 60

tcaccaacga gccattcga gttttgccta ctgtgcacta caatatgggc ggtattccaa 120

caaactacca tggggaggta ctggatatca acggtgataa tccagatgct gttgttcctg 180

atctaattggc tgctggtgaa gcagcctgtg catctgttca tggtgcgaa atgctacgct 240

caaattcgct tcttgacata cttgtttttg gcagagcttg tgcaaacagg gtagcaaata 300

tttctaaacc acgtgagaag cagaaacctc tggaaaaaga 340

<210> 142
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-E11

 <400> 142

 cccacgactc agggacagcc actgcaactc ctcccaaadc ctcccacccg gtttagccgg 60
 ctccgctgcc accgccgcga ctccacctct gtcgccacca tggcgaagtc caaggccatc 120
 aggggtccacg agctgggcgg ccccagagtg ctgcgggtggg aggaggtgga ggtcggggag 180
 cccggtgaag gggagatccg catcaggacc accgccgtcg gcgtcaactt catcgacatc 240
 tacttttcgga aggggggtcta cgccgcgccc accatgccct tcaccccagg aatggaagcc 300
 gttggcgctcg tcaccgctgt tgggcctggc ctactggca ggaaggtggg cgatgttggt 360
 gcatatgccg gcaaccccat gggtctctat g 391

<210> 143
 <211> 359
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB143-003-Q1-E1-B9

 <400> 143

 gaccacacg tcaaccgcn gctatcagct tctgaacccg tcatcaggac caacgctctc 60
 ccttcgaaat gcgaacctgc gccatagcga catctgctgc agtcacgatg tgacgagcag 120
 agataccgtg gatgaagact tcagggactt cgaggctgcg tggatgatc atgtatcttg 180
 ttcatatc atgttatcga gagtttggtt ttctttctac tgcgggtatt caatcaactg 240
 tggcttctgc tggcactctg ttctgttaa gatagcttcc atctcaaac ctacatacaa 300
 atttatagac aattgttgta ccttttttta gtattaaatt tatttatata ataaattta 359

<210> 144
 <211> 337
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C1

<400> 144

cacgcgtcga ccaaggtcgc ctccaacgtc gtcgccagcg cgcagcccgt ggagggcgac 60
ggcggcggttg gcagcgtcag gcagttcaac ttcacctcag tcatgccgtt cagcttcatg 120
aaggagcgtc tcgagttcct cgacgcggac aagtgcgagt gcaagaacac gctcatcgag 180
ggagggcgga tcggcgtcgc catcgaaacg gcgacgtcgc acatcaaggt ggagcccgcg 240
gccggcgggcg ggagcgtggt gaaggtcgaa tccacttaca agctgctgcc gggcgtggag 300
gtgaaggacg agatcgccaa ggccaaggag tccgtca 337

<210> 145

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C12

<400> 145

cgccggccgc ccctaatacc cgccggccct gtgtgtgttc cgcgctacca gccatggcgt 60
cgccgttctc cgtgccttcg ctgatcatgg aggaggaagg gcggttcgag ggggaggtgg 120
cggaggtgga gtcctggtgg ggcacggagc ggttccggct caccaagcgc ccctacaccg 180
cccgcgacgt ggtcctcctc cggggcacgc tccggcagag ctacgcgtcg ggggagatgg 240
ccaagaagct gtggcgcacg ctcaacgcgc gcatgtcgtc gccccgcgcc gagcgcacgc 300
gggcgccgta cgtcgagctc ctcaagccca gcatcgccga tcgcatcac ggctt 355

<210> 146

<211> 93

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C2

<400> 146

acgcgtcgac agttttcctc atgaattgcc tcgagttttc ccagcttctt gagggttaca 60
gcttggtggg cactttccgg ggatgtgtcg tcg 93

<210> 147

<211> 204
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-C9

 <400> 147

 aattgttaaa attggtcaag atcggatcgg aaagaagagg gcacaaggat gttggtttcc 60
 ttagagaggt cgacgaagta gtgagaacag gattgacgcc tgcggagagg ctgctgaacc 120
 tgtacgagac caagtggtaa cgcaacgtcg accatgtttt cgagcatttg ttatactgat 180
 tactgacgat gacgccgccg aatc 204

<210> 148
 <211> 363
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-D11

 <400> 148

 aaataacaca caacagcatc tcaaaaatct aacacactgc aacaagcaga gcaaagaccc 60
 gggattcgcc ggcgcggtag cgagagcgag agatggacgg gaggatgttc ggtctcgaga 120
 cccccctgat ggtggcgctg cagcaccttc tggacgtgcc cgacggcgac gccggcgcg 180
 gcggcgacaa ggcgagtggg gccgcggcgg gcggcgggcc cgcgcgcacc tacgtccgcg 240
 acgcgcgcgc catggcgggc accccggccg acgtcaagga gctcccgggc gcgtacgcgt 300
 tcgtggtgga catgccgggg ctgggcacgg gcgacatcaa ggtgcagggtg gaggacgagc 360
 ggg 363

<210> 149
 <211> 330
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-D2

 <400> 149

 acgcgtcgac agacgcgtgg gttaaagcat gtgcgggcgg atgggctcac gcgtgtgtcc 60
 acgaacggtc agatggagcg tgggtacgtc gacgactacg tcgacgtcta catggtccgg 120

aacgtgtacg tcgagttccg cagcgctcgag ctcgggcgacc gcgccctgta ggagctgctc 180
ggccgcgtct acgcgggggtt acgcatcgac gaccatgtcg cgcccgtgat ggacgtcctg 240
gagggcagct actactcgtg ccaagacctc agctgcgact tctggcgggt ctgcgacttc 300
atggacgtca cgtgcgtccg cttcgacgtg 330

<210> 150
<211> 382
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D9

<400> 150

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tctctcgtc gtctcctcca agcacggatc aggaacactg aaattctatc tcaaccgggtt 120
ctgccgactg ggtaacttga attcgaaaga tgaggcatgg tttggaagtc ttccaagaag 180
cagtcgtacc catgctgata tgaacagaga tgaattggaa ctttggttgc gcagccttaa 240
gcaagagtgg taatactttt gacacaacaa ggtctatggt actcatatct gaatcagaga 300
aagctaacct aaatgattag gcaaggaggc tcctttctaa gcctatcaag tttttcaatg 360
agatgcaaga attgtttatt ga 382

<210> 151
<211> 351
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E1

<400> 151

tcgcggggccg aaccacgcgt cgaccacagg ctgttccact taggcctgaa gaaatacggc 60
aaggggggact ggaggaacat atcgcgcaac tacgtccaga cgcggaacgcc cacgcaggtg 120
gccagccacg cgcagaagta cttcatcagg ctcaactccg gcggcaagga caagaggagg 180
tccagcatcc acgacatcac cacggtgaac ctgacggacg acgagcgggc gccctcgccg 240
tcgcgggtcct ctctgatcac caccaccacc agccagccaa acgcgccggc tccggccgca 300
gtgggtgatag ggggcccctt ctctcgtcgtc tcggcggcgg cggccgaggc c 351

<210> 152
 <211> 123
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-E10

 <400> 152

 ggccgaccca cgagtcaact tgtcctcaac agccgttagg gcgtccacat tgtagaagcc 60
 tcctgggtgt gacaagaata cgttcccatt ggtttcagtc cgggagggat atcgactaac 120
 att 123

<210> 153
 <211> 56
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-A1

 <400> 153

 cacgcgtctg acacgctgcc atgcaaggac gtcctggcct aattagtcac agcacc 56

<210> 154
 <211> 415
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB143-003-Q1-E1-A12

 <400> 154

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 cgcagccaga cctcgccgcc gccgccgccg cgtcctgccg cctcgcgctc gccctcaagg 120
 gcctcccgcc cgtcttccac gaactggagt gggacctcgt catggtcgac gcgcccacgg 180
 ggtggacgcc gcaggcgccc ggacggatgg ccgccatcta caccgcccgc atggcgggcg 240
 gcgcgcgcag gcccggggac ggaccacccg acgtcttcgt gcacgacgtc gatcgacccg 300
 tcgaggacaa cttctccaag gcgttcctgt gcgagggata cctcgccgag caagtcggcc 360
 ggatcaggca cttcgtcatc ccgtcncacc gctagaatga ccgcacacca ttctg 415

<210> 155
 <211> 357
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-A9

 <400> 155

 cgtcagcttt cgggtgcgagg agtttgttca actgcaccct tagcgcgata cattgccggg 60
 gacggtgcaa cttgttgoga gctcctcta aggcgagcgt cgcacatgg ttccaccacc 120
 gtccccaacg acgtgccggg cagctactgc ctgccgctgg cgggcgcgt gcgcgaccgc 180
 ctcgacttct actacttcca ggggcatgac acgtacttcg agtcccgct ggtgcgcttc 240
 cgctccaccg tgggtgcgat ttccgttccg ccgggcccct tcgtggcgcg cgaccgcgg 300
 gtggtggcgg tctgtacgc ctagagcttc cccgtgcgct tcgacatgg caatgtg 357

<210> 156
 <211> 390
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB143-003-Q1-E1-B11

 <400> 156

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 gacgtgcaga gggcgctcca cgccaacgtc accgcctcg accaccctg gtccgctgc 120
 agcgatgtct tgagacgctg gactgacagc gccacgaccg tctgcctat tctcacggag 180
 ctctcaaca acgacatcag ggtctgggtg tacagtggag acaccgatgg gagagtgccg 240
 gtcacttcca gcaggtactc cgtgaaccag ctccagctcc cagttgccgc aaaatggagg 300
 gcatggttca gcnagcactc aggcgccgga gaagtggcg gctacgtcgt gcagtacaaa 360
 ggcaaggaga aaggcancct cacctggtca 390

<210> 157
 <211> 118
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-B3

<400> 157

acgcgtcggg caattgttta acatgaaaga gcacatttga cagatacatc tcagtatgtg 60
gaccatacag cttatttgtgt agcgaagtac gactgtactg gatgaagtga cgcagggt 118

<210> 158

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G1

<400> 158

ggacgacatg gagcgagtgc tctccgacat gctcgacagc gtgtcatgca aaccggacgt 60
ttggaccatg aacatcatcc tcagcctctt cgggaaccgg ggcgaggttg aactgatgga 120
gagatggtac gagaagttcc gaggctacgg ggtcgagccg gagaccgca cgctgaacat 180
cctgattggc gcctacggga agcggcggat gtatgacaag atgtccgcag tcatggagca 240
catgcgcaag ctgcggttcc cgtggacgac cgcgacgtac aacaacgtga tcgaagcatt 300
tgctgaggcc ggcgacgccg ggaacatgga gcacgcgttc aaccagatgc gttccgaggg 360
catgaggccg gacactaaga ctttctgctg cctgatcgac gggttcagca gggc 414

<210> 159

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-G2

<400> 159

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cgaaagagag tatttttgctg ttccaaggaa tctgaaactg cttgctgttc cactgtttga 120
actctacgac aatgttcaga ggtacnggcc tgtcatctct accatccgcg agcagctttc 180
taggttccag ttcaacatgg ttagctctta ggggtgatgat acaagaaaac caatgtggcc 240
aaagcagctc ttcggttgct gagctagctg atcaacgtac cctgactgat tttatttcat 300
tgtgctggat ttttttatat agactactac tatctagaca tgcatttctg attgtattgt 360
tgttgaatt 369

<210> 160
 <211> 197
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G9

<400> 160

accgtgaaaa ctcaatttta ttgtttatta ttcaaaggga tacatgaata ataccgga 60
 aattgtacat acgaaaccaa acaaacatga agtacattat atatcctaaa aaacacagga 120
 aacatctcac aacacagcga cagccacgga ccattcagca tcagttaacc tttcttccac 180
 gtccaaattg gattggg 197

<210> 161
 <211> 378
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H1

<400> 161

cggcgccgct tccgatcggg ttcgctgtgt tcatggtgca cctggcgacg atcccgatca 60
 ctggcaccgg tatcaaccg gcgaggagcc tcggcgccgc cgtcgtgtac aacaacagca 120
 aagcctggag cgaccaggta ttacacaca ttgtccacga ttgcagcact cactcatttg 180
 ttggttgcta atttgctgtt gctgcatgca gtggatcttc tgggtgggccc cgttcacg 240
 agcggcgatc gcagcgtat accaccagat cgtcctccgc gccagcgcca gggggtacgg 300
 ctcttccg agcaacgcct aggaccatct cgtcggcggg ctattcagct ctctctctc 360
 cgcagttaa ggtgaacg 378

<210> 162
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H4

<400> 162

gcacgcctc ctccggccgg ctccggctcc cctgcctt ccgccccttg gtccggccaa 60

tccggcccct tcggcggggc caccgccttc gccgggaaac ggccacgttc cgcgggcgca 120
 agggcccaaa ttcggggccg ccgtgcctgc cgtcgagcaa ttccaccgca ggatgtcaac 180
 ccaagccact gtgcatgcct tcaaggatat tctgaccagc ctcgctaagc ctggaggtgg 240
 tgaatatgga aagttctaca gccttcctgc actaaatgat ccaacgattg ataagctgcc 300
 gtactccgtc cgtattcgtc ttgagtcagc tatccgtaac tgtgataact tccaggttac 360
 cacgaatgat gttgagaaaa taattgactg ggaaaacaca tctccaaagc tggtcgacat 420
 ac 422

<210> 163
 <211> 377
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-E2

<400> 163

ggtcgaggcc gcgtccagga cgagcatcga gagcgagccg ccattgccta gaggactcgg 60
 cgagagctct attcgattcg agactcgaga gcatagccgt gcactgggaa gaggacgtct 120
 acgagcagat gagcgggctg gagctggagc tgggcctgag cctatgcgtc ctcatcgacg 180
 tegtctacga gcagtggatg cgcgacaccc tccccgccga tgacatcccc gtgccgcggg 240
 ccattggcagt caaaactgag gacgccgagg atctatcgcc cgccaatcac gaaagccaac 300
 cagcacaagg ggatgtatgg cgtgattttg ccttggtaaa tctctgattc tttatgctct 360
 acattgtaca agtgcct 377

<210> 164
 <211> 449
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F2

<400> 164

cggtcagat tacgggtcac caccgtcgag gggagtcagc cattgatgaa agtatctgcc 60
 ctggcaattg catagcctgc aatgaccatg ttgcacttac gcaccctgac cttgacaagg 120
 agactgagga gttcattgca gatgtgcttg gggtcgaggt gtttacgcag actattgctg 180

gaaatatcct tgtggggagt tactgcgcct tctctaacag gggtggtttg gttcatcccc 240
 atacatccgt tgaagacctt gacgagctct ccacgctcct ccaagttcct cttgtcgcaa 300
 gaactgtgaa cagaggaagc gaggtcattg ctgcaggcat gacagtgaac gactggactg 360
 ccttttgtgg ctcggaacacg acagccaccg agctctcagt catcgaaagc gtcttcaagc 420
 tgagagaagg gcagcccact gcgattgtg 449

<210> 165
 <211> 353
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B9

<400> 165

ataaggctat atcaatcatg gcgaaacctg aattccctga gttgatagat tttaatccaa 60
 tccatgcaac tgacgtccaa ctaccttcag gtggtacatt tgtgatcgcc cattgtttgg 120
 ccgagtcctaa gaaagcagag acagctgcaa taaattataa taaccgcgtt ttggagtgtc 180
 gcttatcagc gattgttctt gccatcaaac ttgggatgga taggaaaaaa gctatctcct 240
 ccgttacaac cctctccgat gttgaggggc tatgtgtttc ttttgcctgg agagaagggt 300
 catctgatcc tgcagtagct gtgaagaaac ttctgcatga ggacccatat aca 353

<210> 166
 <211> 341
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C1

<400> 166

tggaaagctt caagacgttg aagattggct atatgaagat ggtgaggatg agacacaggg 60
 agtctatatt tctaaactgg aagatcttaa gaagattggt gaccaattg aggcacggta 120
 caaggagtgc acagaaaggg gttcctctgt agatcaactg gtctactgca tcaacagttt 180
 cagagaggct gctttgtcca gtgacaaaaa gtttggccat atcgacatat ctgagaaaca 240
 gaaggtcatt aatgagtgtc ctgaagtaga gaactgggtg agagagagga agcagcagca 300
 ggacgcctta gctaagcaaa ccgatcctgt gctgctcgta t 341

<210> 167
 <211> 310
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C12

<400> 167

gtcacccctc ctctgtccgtc gcctcacaag ggcaccagcg ggccggaccct ccgcggcgca 60
 accatggggc tcttctactgt gacgaagaag gccaccacgc ccttcgacgg ccagaagccc 120
 ggcacctccg gcctccgcaa gaagggttact gtattccagc agccccatta tctgcagaac 180
 tttgtccaat caacattcaa tgccttctct gtggatcaag taagagggtgc aacaattggt 240
 gtctctggtg atggccgcta tttctcaaaa gatgctgttc agatcatcac aaaaatggct 300
 gctgccaatg 310

<210> 168
 <211> 327
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB143-002-Q1-E1-C2

<400> 168

ctgtcaacgg ttggggcggtc atcaagttcg tgcgcgacaa cccaggtgtg tggctcatgc 60
 attgccatct ggacgtgcac atcacctgng gcctggcaat ggctttctcta gtggaggacg 120
 gctatggcga actgcagtcg ctggagccgc cccagttga tcttcccatg tgctagtgga 180
 ggacggatat ttgtgttgag gaagaaagcc tggtcacgtt gtatgttaat tgttactctt 240
 ttttggtgga ggggggctg ttcgtgatct taaattctta ggggacttaa ttttccagct 300
 tgttggtttg aaatttcttc tgtaaat 327

<210> 169
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D2

<400> 169

gcgtcgagga aagcgtatgt gtggataatt acacaaagtg aacttcatgt caccatcaca 60
catacgccttt ccatttcagc ggaggcgatc tagcacgatg cgcattgcct agtacagtac 120
aagcagggag ggtttcttct gaccgaagga ggggaagacc attccagcga gaatcgatgg 180
atatctcagc caaaaaaggt taaaagacga gggggggagg aggaagtga aacgaaatggg 240
aaattctgcc gttggcgtag gtgaagatga agggaggaac aaataatctc cttttctcgt 300
gtcgcataat aacagagaca gtgtgttttc cgttttcccg tttgcctgtg ctgcgttctc 360
tgctcctctc ttcactgctg cgggggtccg gtttcttggg gg 402

<210> 170

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D4

<400> 170

gggtcgacgc ccgcgtccga agcaagcgta catgcgcggc aagaggggtgc tcgagatcaa 60
ccccaggcac cccatcatca aggagctccg cgacaaggtc gcccaggaca acgagagcga 120
ggagctgaag cacacggcga ggctggtgta ccagacggcc ctgatggaga gcgggttcaa 180
cctccccgac cccaacgagt tcgcgtccag catctacaag tcggtgcaga agggcctgga 240
cctgagcccc gacgcgaccg tggaggatga gaacgaggcc gaggagcagc cggaggtgga 300
gaaggagccg gagccggagc cgtcgtccta cgacaaggac gagctttagg ctttcggatt 360
tgttttcaag tctagctagc tcccgtttta ctaggaatgt gaatcagtta cggcct 416

<210> 171

<211> 464

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A1

<400> 171

ggaaccggcc gagaatcccg gggccaacca agcctccgag gaacggcaac aactccggaa 60
ggaaggctcc aacggtccaa caactccaac ccggtccaac ttgctccggt aacaaaacca 120

acccgggcca acgccgaagc aacccccctt cgtcctcgc cagatccggc gccgcctccg 180
 ccctcactta cactagcacg cacggcggac acgtcgctc ccccgcgca tctgatgcag 240
 gcgcacgcgg tggccaacgg cgatgcggtg gaagctaac tcctccgtct acaagcggt 300
 gccgtccagg gaaaccgcca tggaaccga cgtcgagacg ccaatgagaa tgacggacgg 360
 cggcggcagc ggcgcggggc cgtcctggcg catgtcgttg ccgatgtct gtgtcgccac 420
 gtcacctcg ttctccttg gataccacc cgggggtgtg aacg 464

<210> 172
 <211> 377
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A2

<400> 172
 ccgcagcgaa cgagaaagca gaccaaccta gccaccagg gagaaaggcc aaaagggagg 60
 ggagagtgtc gtcattgggtt ccattgtcgc ttccaggatg gccgttctc tagttcgcgc 120
 tctggagaag ctcatcgcaa cgtcctccgc gcccgggact ggctccgcc tcaggccggt 180
 tgcagtgcgc ggcggcctcc gtggctacaa caccggcgct ccgctccgac gctacgatgg 240
 ggccgagtcc gaagacgata gcgtccgca gtacgatggg cggcacggcg gccgggacta 300
 cggcgtgccc agcctgttct cagatatttt ccgtgatccg cttagtgcgc cgcacagcat 360
 tggccgcctg gtgaaac 377

<210> 173
 <211> 356
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-A3

<400> 173
 ccccaatttc gtccctttca caccggagaa cgggcgagca gagccgcgca aagcagaacg 60
 cggaagcaag aggaggcgat cgactactcg accagccctc tccgtcttg tctccgatgg 120
 cggctcgcgt cctcgcgccc ctgcgccctg ccctcgccct cgcctcgtc gccgtaccg 180
 ctcccacgcg ggcgtccaac gacgaggggg acgcgtcta cgcgtgcgg cagcggctgt 240

cggaaccccaa cggcgtgctg cagagctggg atcccacgct cgtcaccccc tgcacctggt 300
tccacatctc ctgcgaccag gtcggccgcg tegtccgctt ggacttgggc aactcc 356

<210> 174
<211> 392
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B1

<400> 174

attaattatt gaggacacag gtgtcggat acaactgcaa gcacaaaatc gggtttttac 60
accgtttatg caggctgaca gttcaacttc aaggaattat ggcgttactg gcatcggttt 120
aagcatcagc aagtgtctag ctgaacttat ggggtggcag ataagtttca ccagccatcc 180
ttctgttggg agcacgttca ctttctcagc cacactgaag cactcatata aagatatttc 240
gggtgattca agtaggagct tgacagaggg actaccaact gcttttaagg gaatgaacgc 300
catcttggtg gatgggagac ctgtacgtag tgctgttaca agatatcacc tcaagagggt 360
gggaataactt cttcaagttg tgaacaatat ga 392

<210> 175
<211> 346
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B11

<400> 175

ggacatgccg cggaccaggg aagggttcta ccgcttcagg ggggccgtgg cggcgccgt 60
gggtccggggc cgcgccttcg cgcgcacgc cgacgtgctg tggatggaga ggtccagccc 120
caacgtggcc gactgcaccg ctttcgccga gggcgtaag gggcggtgcc ccgaggcgat 180
gctgcctac aacctctcgc cgtccttcaa ctgggacgcg tctgggatga cggacgccga 240
gatggccgcc ttcacccga gcgtcgcgcg cctcggttac gtctggcagt tcatcacgct 300
cgccgggttc caccgcgacg cgctcgtcac cgacacgttc gcgcgg 346

<210> 176
<211> 341
<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-G6

<400> 176

acggtctaga atccgggtca acagcgtcag caccgtcgca catctagcag caaccttcga 60
cgtcgtgggg aaatggacgc cccccgccg ccgagaaagg ggtcaccag aaaccgggtg 120
tgcggttacc ctccccgggg aatggccac cggtcctcaa taatacagct gggcaagatg 180
ggcagatcgc gacgactgtc cgtaatcatt gtcatgggtcc agcctccctt caacacgggc 240
gctaccgcgc catacctcgc cggcgtctcc gcagccaacc cgggtccatct ctttccatca 300
cctgccccaa gtcgagcgcc tcccgcccggt caagaccaag c 341

<210> 177

<211> 351

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-001-Q1-E1-G8

<400> 177

gaccacgcgt ccgagaatgc caccagcatg catttacagg ctttgaggag attgacggtt 60
ccanattcta canggccaca ccatccaact tggcaatggg tcagttacaa ccggcttact 120
ggccgggacc ggtccaaaga agattaagat aacctggcaa tcaatccttc cgctcacaga 180
ggaaaggaga tatgaggcat gacctttgat atacaagaga aagaaagagg aagagaggat 240
ttgtttcttg acaagctaag catgacgcct ccaggccaac tagacaagcg tgagagaaga 300
agtttttagta tgacgcggaa ggcagcaaaa ctggatctga acatcaatga t 351

<210> 178

<211> 259

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-H12

<400> 178

tctccgctgc ttactcgaac tgcgcgagga agccatcctg atatctctgt cgtcaccccc 60
atcctagtat cgtagaaacc acctgcattt tcatttggat ctccctaata cctccggcta 120

gctgctttcc agtgagcaag ggatatcaaa ggacacttcc cgtcttcctc ccgtggctgt 180
 ctgtcatctg gctctgaaac gatggcagtc ctgcaaatta ctgctgctgc ctctccccct 240
 gtctctgtga gtgggttcg 259

<210> 179
 <211> 162
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-A11

<400> 179

ttcagaccgc accacgttca ctcaggcgtc acgtggcagc gctacggcca tagtctatac 60
 gcaacgctag ctcaagtcgg ggcgcggggg cgctgtttcc gtgtactata tgctctcggc 120
 acctcggatc agtagtcct gctacggttg gcttgtcccc ac 162

<210> 180
 <211> 315
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-A3

<400> 180

actcgcggat cgatccaagc ctctaccag tcgtacagc taggtcgcaa actcaacaca 60
 cagtcagcct caaacctctt tctcgtccga atccagaact tccatccatg gcagtgtcat 120
 cagggatggc cttctccgtc cgcgcgcggg ctccggcccg gccctgcgct tgctctgcca 180
 cggcgagggc gcgccccgtc ggcgacggcg ccaagtggcg ggcgcgcgct ctgggggtggc 240
 ccgggcagcc ggactacatc gatgcgcggc cggcgctccga ggacgagcct ctgccgcggg 300
 ggccggcctc ggcct 315

<210> 181
 <211> 296
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B5

<400> 181

ccacgcgtcc acggacgcgt gggcggacgc gtgggcaagg caccacacct cttcttcttc 60
 ttctctctcc tcttagcaca gctagcgctt gctccccctt gcctgtgatc atgtcttgca 120
 gcaacggcaa gtgcgactgt ggctccagct gctcctgcgg cagctcatgc aactgcatgt 180
 cccctaacgt ggagaccgcc gccgccagca acatcaagac caggtcctc gccgcgccga 240
 ccaacaaggg caacgccggg cggttccaag ccgccaccga aggcggcggc tgcgac 296

<210> 182
 <211> 103
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B6

<400> 182

ccacgcgtcc gaaaaactac agtacgcata tgatgcgtac gtacgtgtgt atagtttgtg 60
 ctcaataaaa aaaaaaaga aaaaaaaca cgaaagagag aac 103

<210> 183
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B7

<400> 183

ccacgcgtcc ggccgctgat ccaattaaac ctatggaggc tgccgcgttc agcaacacaa 60
 aggacaccgc ttctccaccg gagaagaaac cttcccaacc aactccatca aagaagaaga 120
 acagaaaagg cggcctgtcg ctgttcctga gcggcgctct cgacgacacc caaaaccaa 180
 gcctccctgc ccccgctgtg cctgccacac cgaagcccga aggaccgcc tggggcggcg 240
 tgaagataac caagggacc gcttcgcttc gagacatcca gaccgagcag agcagaacaa 300
 acgagcccgc gtcggccaag gcgaaggacc gccacgagaa ctcgccggac agcgccggcc 360
 gcgcgacaag gctctcctcg ttcatccccg acgcgcgttc cagcccaata g 411

<210> 184
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-B8

<400> 184

ccacgcgtcc acggcgtgcc cgggcccgcg gtggcggtat ccccggcgca gaggtggcc 60
ccgacccagc tgacgccgtc cagcgcgccg cccacgcgcg ggggcgcgat gcccatgccc 120
aggaagcggg tccgcaccaa gttcaccgcc gagcagaagc agcggatgca ggagctgtcg 180
gagcggctcg ggtggcggtc gcagaagcgc gacgaggcca tcgtcgacga gtggtgccgc 240
gacatcggcg tcggcaaggc cgtcttcaag gtctggatgc acaacaacaa gcacaacttc 300
ctgggcgggc acagcgcgcg ccgcagcgcc tcctcgcgcg ccccgcccc cgcgcgcgcg 360
tcgtccaaa cccaaccgc cggcgccggg gctgctgcag caccgtcatt caaccgctcg 420
ag 422

<210> 185

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C10

<400> 185

cacgcgtcca aaagcaacaa tgcagcagca caagcaagaa ccacacctcc tcgcttcgcc 60
tgtgatcatg tcgtcatgct gcggcgga gtcggggtgc gggtccagct gtcctgcgcg 120
cagcggatgc aacggctgcg gtatgtacct tgacgtggag accgccgcca ccagcagcgt 180
caagaccacg gtctcgcgcg cgcgcaccac caaggccagc gccggcggtc tcgacgcggc 240
caccgacggc ggcggctgcg actgcaacac ctgcaagtgc ggcaccagct gccgctgctc 300
ctgctgcagc tgcaactgaa ctggcccg 329

<210> 186

<211> 438

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-C4

<400> 186

gggtcgacgc acgcgtccga ttacatgttt cgatccgggt cactgcgcgg taggcccggc 60
 tggatgatgtg gggctcgggt cggttcttcg tcgcgttget ttcttccttt cctcnccttc 120
 cctccccacg tacgcgggtc gccggcacgc gctcgtgacg cgcaagtcgc aggtcgcagc 180
 aaccgtaacg cgcgcgcgagc ccgcatggcg gcctgactcg gcgccacgcg tttgctcctc 240
 cggccaccat cctggctcct tccttgtcgc cgtttcctcg gctatatagc cgccagcctg 300
 gcggaaggag aacggccaaa ccagcacccg ccgccacag gaacatcgcc gccagatcg 360
 gctgcatacc tgtttcttct ctgggcgcgc gagttcgcat cgtcggctcg tcgttcggta 420
 acttggggga gcaatggg 438

<210> 187
 <211> 134
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C5

<400> 187

ccacacgtcc acccacgcgt cgggccaagt gtgcgtgtgg taccgttgcg atagaataat 60
 cagcatgggt agtgggtgctg ggtcctttcc ctgaaactga aagaaagcag cggcgtgcct 120
 gtcgccttcc ggct 134

<210> 188
 <211> 418
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C6

<400> 188

ccacgcgtcc agaccgtagc agcgttggtta ccacacagat ccaaccattg ggggtctttc 60
 atcatgctga accagaacat cagaaatttg aactgaagcg taaaccgttc ctcttgcaat 120
 tgattgggaa tttgccggag gaggagctcc tgacatcaac actagctgca aaactgaatg 180
 catatgccgc tgagctctgc cctgtgaata cccaaaagag aattaactcc aagattgatg 240
 aggtcacaaa gaaaggatgg ccatttttaa gggacattta actctttcta gcttttggac 300
 tgaaaccgat cgatgcaatg tagacacaga agagggtgcat gattttgcat agaagatttt 360

taggaatatt tcagctgttc gccactgccca tgatgacctc aagcatccag tcgtcagt 418

<210> 189
 <211> 435
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB143-002-Q1-E1-C7

<400> 189

ccacgcgtcc ggcattaagg actgtgataa ggctgtcgag agaggaaggg aactgcatgc 60
 tgatttcaag atgatctcaa gggcacttac cagaaaagga actgctcttg ccaaacttgc 120
 taaatcatcg caagactatg atgctgccat tgagattttc cagaaggcgt taactgagca 180
 ccggaaccca gatacactga aaaaactaaa tgatgcagaa cgagcaaaga aggagctgga 240
 gcaacaagag tactatgacc caagaattgc tgacgaggag cgagaaaaag gtaatgagtt 300
 ctttaagcag cagaaatatc cagaagcagt gaaacattac accgaagctc tcaggagaaa 360
 cccaaggac ccagggtat acagcaatag ggctgcctgt tacaccaagc tangggcctt 420
 tcctgaagggt ctgaa 435

<210> 190
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-C8

<400> 190

ccacgcgtcc acggacgcgt ggggactctt ccattccatt ctattcccgc ttccacacgt 60
 cggtcggcgc ccttcgcgat cgtgtcggtt cttcccgcag cctgcctgcg tgtgggggtga 120
 tggctaggca cttcaagtac gtcacctcgc gcggcgggtgt cgcggcgggg tacgcggcga 180
 gggagttcgc caagcagggc gtcaaccccg gcgagctcgc catcatctcc aaggaaccag 240
 tggcccctta tgagcgcctt gcactcagca agggatacct cttccctcag aacgctgcaa 300
 gactgccagg cttccacacg tgtgtgggca gcggtggaga gagactactt cctgaatggt 360
 actctgagaa aggcattgaa ctgatcctga gtactgagat tgtgaaggcc gaccttgctt 420
 caaagactct gaccag 436

<210> 191
 <211> 374
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D11

<400> 191

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ctacgaccgc gcatcaccg tcttctcccc cgacggccac ctcttccagg tcgagtacgc 180
cctggaggcc gtccgcaagg gcaacgccgc cgtcggcgtc cgcggcacgg acaccgtcgt 240
cctcgggtgtg gagaagaagt caacccccaa gctccaggac tccagggtccg tgcgcaagat 300
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<210> 192
 <211> 305
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D12

<400> 192

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ctctagggtt caacttgagt gtgaagatga tgtgtttgca atacttccat cgttaatatg 180
gtatgcttat aataccctta taaacttttg taaacactac cacctccaag cgagaagaca 240
tatccactta taaaaaaaaa aaaaaaaaag aacaagaaaa aaaaaagagc ggccgctcta 300
gagga 305
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<210> 193
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D3

<400> 193

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gacctggacg cgtccaagta cggcaccac gggagcgca agtcgctcac cggggcggtc 180
cacgccaagg gcgtccagtg cgtcgccgac gtcgtgatca accaccgtg cggcgactac 240
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tggggcccg acatgatctg cagcgacgac acgcagtact ccaacgggcg cgggcaccgc 360
gacacggggg gccgacttcg ccgccgcgcc cgacatcgac cacctcaacc cgcgcgtgca 420
gcaggagctc gcggactg 438

<210> 194

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D5

<400> 194

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aagaggagga agaagaagca tcggcagcat gtcggagggg actgccaact gcgtggacat 120
cctgatcgcc atcatcctgc ctccgctggg ggtgttcctc aagtacgggt gcggccacga 180
gttctggatc tgctcctcc tcacctcct cggctacatc cccggcatca tctacgccat 240
ctacgccatc accaagaaca actagctagt catccttgcc gacgacgac catgtctctg 300
tatctgcgtc tgttcatatg cctgatgccg acttgtgctg tatgtagtgt cttgacttca 360
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<210> 195

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D6

<400> 195

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 gtggtagccc gaattatgca gcacctgagg tcatatctgg taaactatat gctggtcctg 180
 aagttgacgt ctggagctgt ggagttattc tttatgctct tctttgtggc actctcccat 240
 ttgacgatga gaatattcca aaccttttca agaaaataaa ggggtggaata tatacccttc 300
 ctagtcattt gtcaccttca gcgagggact tgattcccaa aatgctgggt gttgatccaa 360
 tgaaaaggat tacaatacgt gaaatccgt 389

<210> 196
 <211> 420
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D7

<400> 196
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 ccgcgtcgag tttagtcgtg gtacgctaga tgattgtgcg agctgaagga catggatcag 180
 aatcttgtgg atgcatcaag ccagcaccag aatggaagat gctcaccaag tggctgtcaa 240
 ttaacaacac taacatagtg tttatcccag gattataagt ttgttctgtt gtggatgggtg 300
 ctaagtgtcg gtgggctcag cttcttata taagtatatc acatctttag cttctttatt 360
 gaggactgtc acttaagcta gcatgtattt taaaacttat aaatgtttta tacattcaaa 420

<210> 197
 <211> 461
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D8

<400> 197
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 gcaagggcgg caaaggtctg ggcaagggcg gagcaaagcg ccaccgtaag gtgctccgtg 180
 acaacatcca gggcatcacc aagcccgcga tccgtaggct ggctcggagg ggcggcgtga 240

agcgcatctc ggggcttata tacgaggaga cccgcggcgt cctcaagatc ttcctcgaga 300
acgtcatccg cgacgccgtc acctacaccg agcacgcacg ccgcaagact gttaccgcca 360
tggacgtcgt ctacgcgctc aagcgccagg gccgaaccct ctacggcttc ggaggctaag 420
ctggatgcct ctcccccttg ctgtcctgga tgcccgtttg t 461

<210> 198
<211> 358
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-D9

<400> 198

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tccaccccaa cgccgcggag tccgtcgtcg cccagcagc agcaccagta ggctccgccc 180
aggcaaacgc cgagggagag ctgccacgg tgctgaccgt gtggcgcaag tcgtgctct 240
tcaactgcga cagggtaac ctctacgaca cgcgcggcga catggccctc cgcgtgtgag 300
aggaaacgcg ggccattccc gcccgcggt ccccgccaac gtcgtgtctca tggacccc 358

<210> 199
<211> 424
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-E1

<400> 199

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gcgccggtcg cgacgcgcat cggtccttt gacaagggtg tggaggcgct gatcggcggg 180
accgacttct ccgaggagga tgcggaggcg acgtgaagc tgctgctgga cgagaaggac 240
caggcgcgca tctccgcctt cctcgtcctc ctacgggcca agggcgagac cttcgaagag 300
atcgtggggc ttgcgaaggc gatgttgagc tgctgcatcc gagtcgatgg tccggatgac 360
gccgtcgaca ttgtcgggga caggcggcga cggggcagac accgtcaaca tctccaccgg 420

gtcc

424

<210> 200
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-E11

<400> 200

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gcgtgcagcc agcggggctg tcctgtcct ccggggcaag caaactgccg ggccccgtgc 180
gggccctcct ctccggttcc gagggcccgg ccaaccggcc ggcgaggagg aaggaaagga 240
agggcccggt aaggctgtcc ttggccctcc ccgcggagcg ggtggcctcc gagggccgag 300
gggtgagccg ctccagggcc gtctcggggg cgctgcgcgc gctcaagctg ctccgctcg 360
acggcgtgga gctgcgggtg tcttgggccc ccgtgcaacc cgggttcggg ggctgtttc 420
aa 422

<210> 201
<211> 379
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-E4

<400> 201

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cgccaccgca atgcgcccgc gcgcgctcc gccatcacgg aatgtgggag tcgcctccgg 180
ctgcggcacc cgcggtggta gtgcggtgcg cgcggggtgc gccgcagggt tccgggatcg 240
acgcagcttc gccggggcac gccgctgtca cggccgcggt agctaaccgc gaaggggggtg 300
acgcgcggcc cagcctggcc gagcggctgc ggttggggaa cctcctggag gaacggctat 360
cgtaccacga gagtttcat 379

<210> 202
 <211> 379
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-002-Q1-E1-E5

 <400> 202

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 tcattaaggg agattccagc atcaagttaa gaatttgaac aaaaaaatgt ccatgctttt 120
 aagttttttg ttggcactta tgactagtgc agttttttcc ttatgcttgt actccttttg 180
 gatcatgttt ttaacttttt atttgatgaa atgctctttt aagatcatgt tcccttcaac 240
 gctacttggg actggggaaa agtggacaat gatgaagaca ataagtgtta ctgaatattt 300
 aaattatgaa gcaggaaaat tttcgaagag taaagggtatt ggagtctttg gtaatgatgc 360
 agaggataca aataatcct 379

<210> 203
 <211> 366
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-002-Q1-E1-E6

 <400> 203

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 cctccgcgcc gtgctctggc ctttcccccg acaccgccag aatcccgaga cctgccggcg 120
 ccgccaacaa gaaaatggcg tgcctctgct cgccgacgag ccacccgggg tcgttccgct 180
 gcagtcggca ccgaaccgcg ccggacggcg ccgagggcgt gcccgggcgc accagggcgc 240
 ggtccgtgcg cgcgctgctg ctccagagga tcggcggcgt ccggcgcgag cccggccgcc 300
 accaccgccg ccgcggtgtc ggagtcgggg acttccagcc gcgcccctcc aggctgcgcc 360
 tcatga 366

<210> 204
 <211> 404
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-002-Q1-E1-E7

<400> 204

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acatccttct ctccgagaag cagtggcggg tgggtgggtgt gcagcagagc cgcggtggg 180
tgactacgc gatgcaccgg ccggagccgc acatcatgct gttccgccgc ccgatcaact 240
agcagcagca gcaggaggaa gcggctgccg cgcatgtgct gcccaagtga agcctctgct 300
ggcgaccacg aatgttaaca acccctagcc ctcttttcat ctctagaagg ggcgtcgtg 360
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<210> 205

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F1

<400> 205

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aatcctgaag aggctttaca gaatactgat aaaaaggag ctcccagcaa gggacattct 180
tcaagccctg agggacgaaa cgatgaatga tcctcgggaa aggattgaga tggcacaaag 240
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agtagaatat aaacggacgc tgtgctgcaa gtttctccac tgtgcttgct gtccttgctg 360
ccgagctaca tggggatggg gctttgtcag ttgtccaatt ctttgtgctt cctcattgcc 420
atggt 425

<210> 206

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F10

<400> 206

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gctactgcgc cgcgacgcgc accttccgta gcaagcgcgc ggacgtcccg ctccccgcgc 120
 acgcggacct ggacgtcgtc aggttccctcg cgtccccgcgc ccacgcgggc gttgtcgcgc 180
 tcgtcgacgc tgccacgggc caccgggtca cgttccagga actctggcgc gcggtggaag 240
 gggcggccac cgcgctcgcc gcgccgcgc tgctcgctccg caagggccag gtcgcgctca 300
 tcctctcccc gaactccgtc cacttccccg tcgccgccct cgcagcca 348

<210> 207
 <211> 360
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F12

<400> 207

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 atgtgcaatc tcttgaccac gctgtcaatg acttgaaaat gtacctcaag aaagtatcag 180
 ccgagaaccc tgggtcttcca tgcttctgct tcggccattc gacgggtggg ggtatcattc 240
 tgaaggctgc acttgatcca gacgtagaaa cgctcatcag cgggtgttgc ctgacatcac 300
 cagctgtccg tgttcagcct gccacccaa tcatagcggc catggcaccg atttttgccc 360

<210> 208
 <211> 440
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-002-Q1-E1-F4

<400> 208

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 aatccaccgc gccgcgacgc atgtcggcga gcagcaccac cgtagacgcc tcggggggagc 120
 cgatcccgc ttcgtcgggtg ctgatggcgg cgtcgaagca catcgcggtc cgggtgccgcc 180
 cggagaacgt tgcccttctc aactgcaaga agaaggaccc taaccccagag aagtgcctcg 240
 agaaggggcg ccaggtcaca cgctgcgtcc tcagcctggt gaaagaactt caccaaaagt 300

gtcccaagga aatggatgaa tatgctggtt gcatgtatta ctacaccaac gaattcgact 360
tctgccgtaa ggagcagcan gcttttgacg aagcctgccc catttctgag tagatcttga 420
gagttttacg tgcagtggtc 440

<210> 209
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F5

<400> 209

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aacctcaggg cagaagttag gtgttctaaa atcagatcat ggaccattgg caataagatc 120
cttatcttcc tgcacaaatt cacacatgat atttgctggt tcgtcagctg gttatgcaca 180
ttgctgggac ttaaggactt tgaggcctct ctgggaaaaa agagtcagcc caaatgtcat 240
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cgtgctccgc gttatatgcc aaaggactgg tgacatcatt cgcagtcttg tcgttgacgc 360
agatctccca gcagaagcca catctagatt ccggcagcaa atagagaaca aacgtg 416

<210> 210
<211> 90
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F6

<400> 210

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aaagaaaaaa aaaaagttac acgtacgcac 90

<210> 211
<211> 438
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB143-002-Q1-E1-F7

<400> 211

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gactgcaacg ccaagaaccc cacctggggc tccgtcacct acggcatctt cctctgcctc 120
gactgctccg ccgcccaccg cagcctcggg gtccacatca ccttcgtcag gtcaacgaac 180
ctcgactcat ggactccaga ccagctgaag atgatggcat tcggaggcaa caaccgggca 240
catgctttct tcaagcagca tggatggacc gatggcgga aggtcgaggc aaaatacaca 300
tcaagagccg ctgaacttta caggcagatg cttaccaagg aggtcgctaa gagcgccacg 360
accgataatg ccttgccatc gtcacctgtc gcatctgagg cttcnaagcc gccatccgat 420
gattccctg aattcaaa 438

<210> 212
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-F8

<400> 212

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tgtttctccc agacggacaa gatctcacat agtcataaag ctaccagaaa atacagagaa 120
tacttgaac atattttgga atatctgaca tcatttctgt atcgacaga gccattgcaa 180
gacattgata agattttttt aaagctggag agtgaattcg aggaacaatg ggccaatgaa 240
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tacagcacag ttgaagaact tggtgagctt ggcccagaaa aattaaaaca ggcttttagct 360
gctcgaggtt tgaagagtgg cggctactgtt caacagcgtg cagatcgtct ttcttctgtg 420
aaggttaca 429

<210> 213
<211> 309
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G10

<400> 213

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 ccggcttccg gcttcgggttc aacaaccgcg ggcaacaacc ccccccttag gaccaaggcc 240
 cgcggtttcc gcaaggacct taatctcttc ggctaccoga gactcgcgct ttggcgcggg 300
 ggagacgcc 309

<210> 214
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G12

<400> 214

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 caaacacaaa ggagggtagg aatagctgtg gtgactcgga agagaaagag acagtcgacg 180
 ccttgttttg ttgatgctta gtgtgggtgac ctgggtggtgg tgggtggtggg tgttcttggc 240
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 tagcaaccgt atgccttggc ttctgttttg ggtgcgtgac ttgccgactt tctagctgct 360
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 c 421

<210> 215
 <211> 406
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G4

<400> 215

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 actatagcag acaagggtga ctatgggttac aagttctttg agaaggaggc ccctgttgat 120
 gctgtgttcc agaaggacga gatgatcgac atcatcggag ttaccaaggc caagggttat 180
 gaaggcgtgg tcaactcgtg ggggtgttacc cggcttcccc gcaagacca caggggcctc 240

cgcaagggttg cctgtatcgg tgcattggcat cctgctaagg tgctgtacac tgttgctcgt 300
gctggtcaga acggatacca tcaccgcact gagatgaaca acaacgttta caagattggc 360
aaagccggac aggaaagcca tgacgcctca actgagtttg acagac 406

<210> 216
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G5

<400> 216

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gcgaccacca gttcatagtc ggcgccacca acccgggcct cagggggccag agcctcgcgg 120
ccgtgctgtc ggccggcatg tcggcgggca agagcggcag ggagctccag gccatcgagg 180
acgagtggct ggccgcggcg cggctcaaga ctttctccga gtgcgtcagg gacgccatcg 240
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ccggcggtta cgacaggtgc gtgtccaacg accaggcgcg cgacatcgcc gccagcctcg 360
gcgtcacgtc cgtgtttctgg gactgggacc tgccgcggac caaggaaggg ttctacggct 420
tcagggggtc cgt 433

<210> 217
<211> 438
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-G6

<400> 217

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tttctgctct tgaagcttgc cgttttgata aggtaaggcc tgctcagagat agcatgattg 180
atgcagtaca gttgtggaaa aaactgactg gagaagatgc aactgacggt agaaataagg 240
atctagggtga tgggtgaaggg aaactggact caagacggtc aatgcaaagt ggtggaaaat 300
cagaatgctt tgatgattgc tctccagatt cacctagtaa catgaaggga agtagcatag 360

ctgaaaaggc agcagttctt ttgaagaaaa gaccagcatt aactgacagg gaactgaacc 420
ctgagttctt caaaaagc 438

<210> 218
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H10

<400> 218

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gctgctggta aattcaaaga ggaaattgtg ccagttcata caaagattgt tgatccaaaa 120
actggtgagg aaaagaagat cgtagtctct gcagatgatg gaatccgagt ggatacttct 180
cttgcagtcc tgtcaaaact caaaccagca ttttcaaagg atggcagcac tactgctggg 240
aatgcaagcc aagtgagtga tgggtgctggg gccgtcttgc taatgagacg ggatgttgct 300
atgaagaagg gtcttccagt tcttggtgtc tttaggacct ttgccgctgt tggagttgat 360
ccaactgtta agggtaatgg gtcctgccgt tgcaatccct gcagcagtga aagctgctgg 420

<210> 219
<211> 444
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H2

<400> 219

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caaggcccca acgccaacg caaggtaagt tagccaattg ggcaactggc ggctttctcc 180
ccaagaaaaa caacaagcaa aaacttcggc aacctcaacc ctggaatcgt tccccaccat 240
ggcgtcgcag ggatcctccg tcttcgccgc actcgagcag gccccggagg accccatcct 300
cggagtgacc gttgcctaca acaaggatcc cagccccgtg aaggtaacc tcggggtcgg 360
cgcctaccgg accgaggaag ggaagcccct agtgctgaac gtggtcaggc gcgccgagca 420
aatgttgatc aataatccgt cacg 444

<210> 220
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H5

<400> 220

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ttgcttgctt gctgcttacc tctcagttcc ccactcacgt cccttgccgt acgtacgtgc 180
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cgttcccggc ggagatcacc gtcggcaacc ctctctcctt cctaggcaca ggtatcacgg 300
acatcgagat ccacttcttg cagatcaagt acaacgccat cggagtctac ctccacaacg 360
ccggcggcgg cgacagcacc acgcccacgc tgctggggc 399
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<210> 221
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-002-Q1-E1-H6

<400> 221

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gggaaggagc ggtagggagg cggagatgat cgaggtggtg ctcaacgacc gcctggggaa 180
gaaggtgcgg gtcaagtgca acgaggacga caccatcggc gacctcaaga agctggtggc 240
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ggaccacatc accctcaagg actacgaggt ccacgacggc atgggcctcg agctctacta 360
caactgagcc gccgccctc tctccctctc gtcaggttgg tctgaattct gaagtcattg 420
gtgc 424
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<210> 222
 <211> 391

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-002-Q1-E1-H7

 <400> 222

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 acatcttgaa agcctttgcc atgtcaggtg cgctcgcatg gcaggcatca taataaagat 180
 gttggttttg tgtgctgggt gggagatcgc acagggaatt gtttttttat ccctgggttc 240
 tcccgccctt tgtgtcgccg tgcctgctt cgtgttgttt ggcttcacgt tctacgttc 300
 atcaccggtg ctgcttcaaa ttgaacggat cttctcgtct cgcggcgtgc tgcaaattga 360
 acggggctac atcgcaacgc agcacaggac g 391

<210> 223
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-A10

 <400> 223

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 ctcgaccgcc agccgttcgc ctcatcatgg cagcgtcgtc gacggcctgc tcggtcgacg 180
 acgtcagcgt caaggatgcg agctgcacaa acgttgacct caccacctat tccgggaacg 240
 ttcttctcat tgctaattgc gcatcgcaact gtggcgtacc taactcgatg ctacactgag 300
 ctggcccagc tctactagaa gtacacggac cacggctttt agatcctgtc tttcccatgc 360
 aactagtttg gtgcgcagga gcctgctacg aatgaagaga ttgtccattt tg 412

<210> 224
 <211> 327
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-A2

 <400> 224

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 agagataatg cacagggatc aagatgggtga tggaaagtta atctttgacg aatactttac 180
 tgggctacat gaccatagac atgggttatgg tgacgagaat gcagatattt cgcagattgg 240
 gaagataaga gttgcgacgg atcgggtttta caaacgtgag atagataatg atgggttttag 300
 ttccggagcat gaactacagc ctgttct 327

<210> 225
 <211> 338
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-A5

<400> 225

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 accttcattc tctactgtga acttgctgt gtccttcag cagttggacg atgaggacaa 120
 actgcaacaa gtgtcaaag ctctctcaga gttcattcgg aaagccacgg tggtttgagg 180
 agaatgagaa atgttgagc ggcgtgtagg atcaccgaat gcatagtacg gctccatact 240
 tctgctctgt ttctgctgt aactcaactg tgaaaagttt taaactttca gaaagaaaaa 300
 ccgtgagagg tgcaggttca agttaatatg aataataa 338

<210> 226
 <211> 273
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-A6

<400> 226

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 attcattaaa gtgacgttcc atactaatgc tccgcacacg cctgccaaat atgaaacagg 120
 tgtatctacg gtcttcagtg tcatgcgtat cttctcggag accaatgatg ctgctaagtc 180
 atacggtcac gagcataagg attaacggct tgcgatgaat atgtgctcaa cgtcgacggc 240
 ggccgtagca cagtatgaga tgtctctccg cac 273

<210> 227
<211> 104
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-A8

<400> 227

aattcccgga cagacccacg cgtccagact ttctcacagt cgccgccgct gtacattgtc 60
cactgcgctc tgttcaacga ctttgacaca tcgacgggaa acgg 104

<210> 228
<211> 303
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B1

<400> 228

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tcgcgccctc ctccagcagc cagcagtcgc tcccggcgca ggtggcgcg cgcgagaagg 120
tcgccgacaa ggtcgcgctg tgcttgccca gcgacggcag gtccacgtcg ggcgacagcg 180
tcggcggtggc catcttcggc ggcggcccg cgttcttcgt cccccggac cgcggcgact 240
tcaccacgat gctggccggc actgcgccgc tccacgccgg agccggagcc ggtgcccccg 300
ggt 303

<210> 229
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B12

<400> 229

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gcattctata tatcacatga tggagtaatc ggaacaataa ataactttcg cctaggacgt 180
ctttctaatt tagaggttga gtgggatgag ataaatgctg catgggggtca ggctgcactg 240

ctgttgcata ccatggetca gtatttcacc ccaaaattcc aataccggat caagattcac 300
cctatgggaa gctatccaag agtcacagac atccagaata acacatatga actgtttggt 360
cccgtgaatt tgttctggag cacccgattt gacaaagcca tgacatgggt tcttacttgc 420
ctgca 425

<210> 230
<211> 334
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B2

<400> 230

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tcaggagca atgtgaacaa gaaagaacag tctgactgc gagctgtcat caagtgtgtt 120
gaggatcgtg aactagaagc tgagtttcca ctggagggtc ttcggaagca acttgaagaa 180
ctagagaaag ccaagaccga gaagaagaag gcagcatcaa gcgctaccag tggcagcagc 240
ggcggccctg caaccaagcg catccgtgcg agcactggag gcccaatgcc tcttgccaaa 300
gcacgtcgtc tctaatacaa tgcttgctg tctt 334

<210> 231
<211> 343
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B4

<400> 231

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ctcgtctccc tcgtcggcgt ctacctctc gccatctcg tgcaggcccg tcgtcgtcgt 180
ggtctaccgc cgggacccca cccgctgcc atcatcggca gcctccacct gctcggtaac 240
caaccgcacc gctccctcgc caggctcgcc atgactcacg gcccgctcgt gtcgctccgc 300
ctgggctcgg tgaccacggt ggtcgctcc tctccggccg ccg 343

<210> 232
 <211> 339
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-B5

 <400> 232

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 cctagccacc cagggagaaa gagggcaaaa gggaggggag agtgtcgtca tggcttccat 120
 tgtcgcttcc aggagggccg ttcctctagt tcgcgctctg gagaagctca tcgcagcgtc 180
 ctccgctccc gggactggct ccgccctcag gccgggtggca gtcgccggcg gcctccgcgg 240
 ctacaacacc ggcgctccgc tccgacgcta cgagggggcc gagtcggaag acgatagcgt 300
 ccgcgagtac gatgggcggc acggcgggcg ggactacgc 339

<210> 233
 <211> 136
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-B6

 <400> 233

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 ctactatcca ccgacggaca aagtggccag aagggatggg aactgtcct cgattccctc 120
 cagttgtccc attcca 136

<210> 234
 <211> 341
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-B7

 <400> 234

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 gaaagcagac caacctatcc acgcagtgag aaagaggcca aaagggaggg gagagtgtcg 120
 tcatggcttc cattgtcgct tccaggaggg ccgttcctct agttcgcgt ctggagaagc 180
 tcatcgcagc gtcctccgct cccgggactg gtcgccct caggccggtg gcagtcgccg 240

gcggcctccg cggctacaac accggcgctc cgctccgacg ctacgagggg gccgagtcgg 300
aagacgatag cgtccgcgag tacgatgggc ggcacggcgg c 341

<210> 235
<211> 338
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-B8

<400> 235

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cggccgccga ggcggaggag gttgctgctc ctgaggagcc cgagaaggcc agcgagttag 120
gccgtgcgca cgcagcggcg ggggccaggg cccaggggat cggcgtgcgc gcgtggcggg 180
gtagtcgctc gcgcgcgtac atggcagtat gacacgggat tttgctgttc agtacgctac 240
ggttattact ggcgtctctc tctgtgtgtg tgtgtgtctc gtacgtagcc cggtagctag 300
ctagcagtga ctgtcgcgtg gacgtgtccg gtgcgggc 338

<210> 236
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C10

<400> 236

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ggaggcggag gcgaaggcga agggcaacgc ggcgttcgcg gccggccggt tcgaggaggc 120
tgtccagcac ttcagcgacg ccacgcgct cgcgcccgac aaccacgtcc tctactccaa 180
ccgctcggcg gcgtacgct cgctctggcg ctacgcggag gcgctagatg acgccaagcg 240
gaccgtggcg ctgaagccgg actgggccaa gggctactcc cgcctcggcg ccgcgcacct 300
tggcctcggg gacgcgcca aggcgctcga ggcctacgag aaagggttg cgctcgagcc 360
gtccaatgag gcgctcaa atccggcctcgc acaggcgcgc cagtcgcgat cggcgccgag 420
acgtccggtg ggct 434

<210> 237
 <211> 329
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-C3

 <400> 237

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 cggggacggg gccggacgtg ctgccggccg acccctacta gcgcgcgggtg gcgcgggttct 180
 ggggcgcgta catcgacgac aagggtggagt cagcgtggct ggggatgctg ttcaggtgcg 240
 cgaacgatga ggagagggcg ggggctgtgg cgcgcgcccg cgaggcgctc gacgcgctgg 300
 aaggcgcggtt ccgggactgc tccagcggg 329

<210> 238
 <211> 348
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-C4

 <400> 238

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 cctcccttcg cctgtgatca tgtcgtcttg ctgcggcggc aagtgcgggt gcggctccag 120
 ctgctcctgc ggcagcggat gcaacggctg cggtatgtac cctgacgtgg agaccgccgc 180
 caccagcagc gtcaagacca cggctctcgc cgcgccgacc accaaggcca gcgcgggcgg 240
 cttcgaggcg gccaccgagg gcggcggtg cgactgcaac acctgcaagt gcggcaccag 300
 ctgcgggtgc tctgtctgca gctgcaactg agctggcccg gcccggcg 348

<210> 239
 <211> 341
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-C5

 <400> 239

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cgccctaatgc agttgagatt gaaccagcga acggttttct aaactcggaa gggctggcat 120
 cactgaagtt cagaaggata tcatacctct tgtcaatggg aaggataaac tgcaagggtt 180
 actactgtaa agaagatgaa gtttgtctct accaatcgat tgcttttgat gtcaaattcc 240
 gtgaagaggc ggaaccgaac ccagcacaaa ttacgctatc ctatactgtt tcgccaagag 300
 ataattcagg tagcacacaa ctactggctg ctaaaaagaa t 341

<210> 240
 <211> 337
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C6

<400> 240

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 atgtgtctgt ctgtggtgtg tctctctgac ggcccatgc gtcagcgtca ctgcttgctt 180
 cagttctgca tctcactctg ttgaggtgaa aaactgataa catctttgca gtgctagaaa 240
 acctgagaac ctcatgatat ctaagtaact gagccaagag agagagagag agagagagta 300
 tctaagtacc ttgatccact tggacagcac agttaga 337

<210> 241
 <211> 311
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C7

<400> 241

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 ctgatggctt ttgtttggat gtatttggtt ttgatgactg ggatacaaag gaaacagata 120
 ctttgctaca gattctcaag gagacagcgg cagcaaatca tgccctatta tcaaaccxaa 180
 ccaattctgc agcctcagaa agagtactgg aactacaaga gaagattggg gattcaaata 240
 ttgacaggaa ttcatatgat attatatatg gattagctgg ttcatatttt taatgctaca 300
 atgttattgc t 311

<210> 242
 <211> 337
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-C8

<400> 242

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cacaggggga actggtgggt ctaagaacaa gcttttcctg gatatgcaag cattaanaagc 120
caaaatatca ggtctggcct cgaatctctc tgctgaggct ggggggaaag gtgcagataa 180
gaagaacctt actgaccaa gagacttggt tcaacgaatc ttagattttg tcaagtatgg 240
tgactgccct gaagaatcaa tcaagattgc tggaaaacgt gatgttttaa ggggtgtcatc 300
gtggtctgaa ttaatccagt tgaatttctt aaagcgg 337
```

<210> 243
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D10

<400> 243

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cagcagcgca agaggtcggg agagcgagaa gaaggcaatg ggggccgaga gcttcctttt 120
cacctcggag tccgtgaacg aggggcaccc cgacaagctg tgcgaccagg tgtcggacgc 180
cgtgcttgac gcatgcctcg cgcaggaccc cgacagcaag gtggcctgag agacctgcac 240
caagaccaac atggtgatgg tgttcggcga gatcacgacc aaggcgaccg tggactacga 300
gaagatcgtg cgcgacacct gccgcgagat cgggttcacc tccgacgacg tgggcctcga 360
cgccgaccgc tgcaaggtgc tgggtgaacat cgagcagcag tcccccgaca tcgcgcaggg 420
cgtgcac 427
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<210> 244
 <211> 342
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D5

<400> 244

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ttcgtcgacg acaggttccg gaagctcgac gccgatggcg acgggaagct gtcggtgaaa 180
gagctccagc cggccgtcgc tgacatcggg gccgccatcg ggctgccggc cagaaggctg 240
tcgccgcaag cggaccacat ctacggggag gtcctaaacg agttcactcg cgggaagcaa 300
gagtccgtgg gcaaggccga gttccagcgc gtgctgtccg ac 342

<210> 245

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-D7

<400> 245

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aaatacacia accgacactt atctacatgg ttttccaccc atcacagtgc atcttgctta 180
tctacttaaa cgcactcggt tgggtctcaa taatactgcc acagcatgca gggaccatct 240
ctttgtttct ttgatgtctc atggcacaat tattgggctg cttagttgct atattctaaa 300
aaagaatctt tttttttttg gtgtagtagg aatgtaggat 340

<210> 246

<211> 276

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E6

<400> 246

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cagagaccag gaacccaaat cgagaaatat cacggaacaa aaaagcagaa tccttcttgc 120
gagccgcagc tatttgcagc aagacttccc attcccacta acggctgccc ctgccctg 180

caatcatgtc gttgtagtgc ttgagcgact cctgccgctg cagccgcac cccatgttga 240
acttgtggat gaacgcctcc acgcggcggg tcagct 276

<210> 247
<211> 326
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E7

<400> 247

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ccctcccccg ggcgcgtga tcgacgcggc tgagctgggg tcttggtcgc tgtaccgcgc 180
cgtgatcgcc gagttcatcg ccacgctgct gttcctgtac atcacggtgg ccaccgtgat 240
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gggggtgctg ggcacgcct gggcct 326

<210> 248
<211> 193
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-E8

<400> 248

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tgttcgggtc gtttttgcca cctgttcgct agcggttctc gcggccctgc gttgtccgtc 120
tctgggtacg ctgtgtcgcc gccggcgctg tgctctggct cctctcggtg gtggtccagg 180
tgctgctggt gct 193

<210> 249
<211> 361
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F1

<400> 249

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tggaacgagtc gtccctgctc gcctacatca aggccacgcc ggcgctcgcc tcccgcctcg 180
gcggcggtgg cagtctagac tccatcgaga tcaaggaggt cggcgacggc aacctcaact 240
tcgtctacat cgtgcagtc gaggccggcg ccatcgctgt caagcagggc ctcccgtacg 300
tgcgctgcgt gggggattcg tggcccatga cgcgggagcg cgcctacttc gaggcctcca 360
c 361

<210> 250
<211> 436
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB143-003-Q1-E1-F10
<400> 250

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ctgccctctc cttcgcgtga ggcggccccg gcgaccgcgt cggcagtgca agaccagacc 120
gaggcttctc ccgttgaag gttccagcca tggcgagcgc cgatctgctg cggaaggagg 180
aggagttcta ctctccctc tttgattccg caaaaggcga cggcgtcaag tcgcgctcgc 240
aggtgattga gaggaagatt gaatccctcg aggacatggc caccaacgtc agcaaccgga 300
gatcaagaag atggttgaac gaccgcttgc tgattgagct tgtcncacgc cttcatgttg 360
aagaaatcaa aggcctcttt gctcctccac catggggtga ggagctgcc ttgtcagcat 420
tctgcaggac aagtgt 436

<210> 251
<211> 343
<212> DNA
<213> Zea mays
<223> Clone ID: LIB143-003-Q1-E1-F3
<400> 251

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cccattcacc gccaccgcca attccatacc gtctctcgcc acctctgctg agagcgagaa 120
gagatggcag gcaaggggtga tgggccggca atcggcatcg atctcggcac gacgtactct 180
tgcgctcgcg tctggcagca cgaccgtgtc gagatcatcg ccaacgacca gggtaaccgc 240
accacaccct cgtacgtcgc cttcaccgac tccgagcgcc tcacgcggaga tgcggccaat 300
aaccaggtcg ccatgaaccc catcaacacc gtctttgatg cca 343

<210> 252
<211> 347
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F4

<400> 252

cccgggccga accacgcgtc gaacgttatg tcagaaggtg catatatgct tttctacatg 60
aggtctttcc cccgaccacc aagaatatac atcgagaagg ggccgactgt tccatccgcg 120
aagcgccaca catcaaagta ttccaagggc tctaaacacg agcgcgagca gacagagtta 180
ctctctcgg cgaacgatcc agcatacggt gtttatgact ttagaccgga tggcgagggc 240
tacacgcaag atcagcaagc agagttgaga tccagggaat tccatcgcgc cgacgatgcc 300
ttcgcagact cggttagcgc ggacttctcg gaggccacgt caagcga 347

<210> 253
<211> 349
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F5

<400> 253

gtaccggtaa ggaattcccc ggccgaccca cgcgtccacc caccggtccg cccacgcgtc 60
cgcccacgcg tccgtgaaga acaaggTTTT ctccattgat ctcgtttcag atgaaccttc 120
agtgattgct tgtgatatgg ctcatactcc attggagcca tcctctatag atgttgcaat 180
atTTTgtctt tctttgatgg gaatcaacta tccaagttat ttagaggaag caaatagggt 240
tctcaaacca agtggttggc ttgttattgc tgaagtgcga agtaggctag acccgagcaa 300
cggaggtgct gatcctgaaa agttttctaa agccattatc cagcttggc 349

<210> 254
 <211> 338
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-F6

 <400> 254

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 gcgtcaagct cggcatccag ggattcgagg tgtccaagct ggggttcggg tgcattggggc 120
 tgacggggcg gtacaactcc ccgctggacg acgaggccgg catcgccgtc atcgcgacg 180
 ctttcagccg cggagtcacc ttgttcgaca cctccgacgt atacgggccc ctcaaccaacg 240
 aaatcctcct cggcaaggcg ctgaagcagc tgccgcggga gcaggtgcag gtggccacca 300
 agttcgggat acggcatgac gagagcggca cgcggacc 338

<210> 255
 <211> 340
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-F7

 <400> 255

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 cactagcagc catgcccac ctcgtcctgc ttctcttctt cggcctcggc gggctcctgc 120
 ccgcggcgtc ggccgcccac gagcagttcg tgttcgacgg cttcaagggc gcgaacctca 180
 gcctcgacgg gatggccacg gtcacgccgg acgggctgct catgctcacc aacggcacca 240
 gccagctcaa gggccacgcc ttctaccgg cgccgtgcg gttccacggg gcgcccgcg 300
 gcacggcggc agcgatggag tccttctcca cggccttcgt 340

<210> 256
 <211> 271
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-F8

 <400> 256

attccccgggc cgacccacgc gtccatcccc tccacgctcc ctttcccttc ctctacctcc 60
cctacccccgc cgccccgcaa tggccggcct cctccacctc cagtccaacgc ttctaccctc 120
ggcatccgct ctccgccgcc gcgcgggcgc gccggtgccc tgttcgtccc gccgccgatg 180
ccgggtcaag gcaagattcg ggagattttc atgccggcgc tcaactccac catgaccgaa 240
ggcaagattg gtccctggaa cgccgcccaa g 271

<210> 257
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-F9

<400> 257

aattccccggg ccgacccacg agtccagctt cctgctgagc tcaaaccctc tccgcctccc 60
catcaaccat tccatccgcc gccgccgccg cctgcgcatg atgaatgtgg ataagctcaa 120
caagatggct ggcgctgtat gcaccggacg gaacggcagc atgcgcatga agaagaaggc 180
agttcacaag accacgatca cagatgataa gcggcttcag atcaccttga aaaggatcag 240
ggggaacacc attcctggta acgatgaggt caacatcttc ataggacgat gttgttatcc 300
agtttcagaa ccgaaagtg catgcatcca ttctgcaaa tacatagggtg gttagtggag 360
taccacagac aaaaagtctg caagaccttc tgccatcagt tatcaaccaa ctgggccttg 420
ataacct 427

<210> 258
<211> 349
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G1

<400> 258

tcgcggtcgc aaccacgcgt cgccccacgc gtccgcccac gcgtccgccc gtttcgagcc 60
agggcatcct cgcgtctcgc tctcaccctc cctcggcgcc tccccgacca cagtgtaaag 120
cccctgtccc ttctccccc ccgactcgcc cctcatggcg aggaggcgct gctgatgcct 180
cgcggcgctg gatcggaacg ggcggccacg acacctagcc gcttgcggtg gcgctcgctc 240

acgcgccc aa tccgccgacg ctgctcctcg gacccccca gagattcagg ccccgctctcg 300
 cctcgtcctg cctagtgcct aggtgaggct ctggccttca aaggtgcgt 349

<210> 259
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G10

<400> 259

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 atccatggac tcggaaggag ttgtagcagc aaaggtggca gatgagacta ctaaaccggc 120
 aatccaagaa gacggcgccg agagcaaggc cgggatgact gatctgctga tgctgaccga 180
 caagtcgcag ctgcaggcgc tggcgatgct gctgcggaac aacgaggagc tcatgatgag 240
 ccaggcgatc aagtcggaga cggagcgcat tgagtacctc aagacgggtga gcgactgcta 300
 cacgcgagc atgaagctcc tcgacgattc catggcggcc aggaccacgt acgagcgttc 360
 gggcggaatg aggagcctcg tcgcccggga catggacgac tacgtcgtct acggcctcaa 420
 c 421

<210> 260
 <211> 430
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G11

<400> 260

cccggggccga ccacgcgctc cagacagacg gtggccggac aggtttcttc aactcgatca 60
 ccctgaagcc cggcgacttc tgtggcgagg agctcctcgg atgggcgctc gtccccaagc 120
 ccaccgtcaa cctgccactg tccacccgga cggatgaaggc ggttctcagag gtcgaggcgt 180
 tcgctctcca ggccgacgac ctgaggttcg tcgccagcca gtccaggcgc ctccacagta 240
 ggaagctgca gcacacgttc cgggtactact cccaccactg gaggacctgg gccgcgtgct 300
 tcatccagca cgcttggcgc cgcctgagga ggaggaagat ggccaaggac ctgagtctga 360
 gggagtcgtt ctgctccacg ggaccgtacg aaggcgatgg cgacgacgcc tcctcccctg 420

aacagagtat

430

<210> 261
<211> 219
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G2

<400> 261

ccgggtcgac acacgcgtcc gaccttcct ccattcaaga tcttccctct ccggtattctc 60
tctctgcctc cagtccatag ccaactctgac tatctgcccg attccgcctc ccggttcttc 120
ggacaccctc gctcctcgg atagttcggg tcgacggtcg gcctagcttc aatttcaggg 180
atggtgttct acctgacggc gcggtctcat ggcggccac 219

<210> 262
<211> 252
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G3

<400> 262

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cgtctacgcc tacaactttt gggctctctc ttctttccac gatatcgctt ctagtggttt 120
cggacacaat cgaagggtccg gctattggga ttgaactctg aaccaactaa tcttgcgctc 180
gactgtgaca tcaactgccg attgagatca tcgccaccta tcatgggaat ggcattcagtc 240
tgtcatatgt cc 252

<210> 263
<211> 356
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G5

<400> 263

ggtaccggt caagaattcc cgggccgacc cagcgtcca ccccgctccg cctccactcc 60
tcgcgccgt gccgatctc ctctacaggt aagaaggaga gaaagagggc gaaatggtga 120

agcacaacaa cgatcatcccc aacggggcact tcaagaagca ctggcagaac tatgtcaaga 180
catggttcaa ccagccccgcc cgcaagcaga ggcgccgcat cgcacgtcaa aagaaggctg 240
tgaagatatt cccacgacca actgctggcc ctcttcgtcc cattgttcaa tgccagactc 300
tcaagtacaa catgaagtca agggctggga gaggctttac ccttgaggag ttgaag 356

<210> 264
<211> 336
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G6

<400> 264

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tcttgatcct gtggctgaca aggtttcttt ctctctccac tgcccaccat ttcttgcat 120
gtttacaact aagaatatca gttctcaaga tgagctactc acaggatcta atttaattgc 180
tctaattctt tactgcagct tatggtagcc gcgacattag ttttactatg caccaaact 240
ttggaaacat cactgctcaa tgatgggcca tggcttctaa cagtcccttc cattgctatc 300
attgggagag aagtagttac tctgccaatc tgcatt 336

<210> 265
<211> 355
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-G7

<400> 265

aggtagcgct caggaattcc cgggccgacc cacgcgtccg ctccaccgtc gtccgccgcc 60
gccgaaggac ggaaggagaa gagggtagcg ccgtctcctc gcccccatgg cccacgagaa 120
gaagctgtcc aacccgatgc gggagatcaa ggtgcagaag ctcgctcctca atatctccgt 180
cggggagagc ggcgaccgtc tcacccgcgc cgcaaagggtg ctcgagcagc tcagcggcca 240
gacccccgtc ttctccaagg cgaggtacac ggtgcggctg ttccggcatcc ggcgtaacga 300
gaagatcgcc tgctacgtca cggtaggggg cgagaaggcc atgcagctgc ttgag 355

<210> 266

<211> 335
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-G8

 <400> 266

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 tgттаattat atttgtgggt cttagtctaa aatcacattg aagagggaga cggaccaag 120
 tgatgcagtt catgtgtcat ctgtatcagt ctctatTTTT ataagctgtc atatgttttc 180
 tcgaaactat cttgtgttga ttttgtgtga tgtgtacttt taatggcaca gggccatgta 240
 tttccttgga aacgaccata agagtttgta tatggactta ttttttctcc cattttcttt 300
 cttgagatgg gctgtatatt tgcttgaaag ataag 335

<210> 267
 <211> 394
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-G9

 <400> 267

 attccccgggc cgacccacgc gtccagcgtg cttcctgctc cgcttctcta cgggtgggca 60
 tgccatgggc agcttcgggc tgacaggcgt gtccgtgtgg gaggcgctgg tgctggagat 120
 cgtgatgacc ttctggctgg tgtacatcgt gtacgccact gcggtgtaag cgaagagggg 180
 cagcctgggc aacatcgccc ccattgccat cggcttcacg gtccgggcaa acgtccagga 240
 tgggccgcac cctcgacggc ggcgtccagt aataccgccg tgctgttcgg cctcgccctc 300
 gtcagctggc agtgccgcta ccaatgggtg taatgagtcg ggcgtctcat cggatgcgga 360
 cactccggcg ttatctacga gctgctcttc atct 394

<210> 268
 <211> 370
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-003-Q1-E1-H11

 <400> 268

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attcgctcag tggacacgat tcaatacccc ccacctcaca catgattcga acaacgatgt 120
ctctgactcg ccgtggagat gctgtctatg tattctctga tgacagatgg gaccttgacg 180
atggcatccc attaggtctt ggaagctcca gcaacaacgg actgtaccct gcggtcgaag 240
gcactaacag atttcacacg gccgcgttcg ctgggtgctcg aatgtaccga caggaaactc 300
cagatgcaca ggtcttcaca accaacttca cagggtctgag aaatgatgat gtgaagggtgc 360
atctggaaga 370

<210> 269
<211> 346
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H3

<400> 269

tcccgggtcg aaccacgctt ccaacctaca gcagctacac gctggcgctc ccacggtcga 60
cacgacggtg acgaccagtg ccgcactcta cctcggcccc gaagtcgaac ctgaaaattt 120
tggaacaat ggaagaggaa gagtatagcg ctgaaatata taatgaacaa gatggcgaaa 180
cagaatgaaa tgctggtgag agtgatgtct tcagaaccag ttgatgtaga tgcagcatgt 240
ttacgaagag tacggatgat atttgactct gaggaagatg cctttcagtt ttatgtgaca 300
tatggttgct acgcaggttt tgggtactaca agaacatcta acaata 346

<210> 270
<211> 352
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H5

<400> 270

aggtaccggt caagaattcc cgggccgacc cacgcgtcca cgcaatgggg catgatctga 60
agaagttttt ggggtgtgatc gtgggtctgt gggttctctc cggagttgga agcagctgtg 120
acttcctcac gttgacatac attgccgtcc tgatgtccca cacggtgccca atcttgtacg 180
acaagtacca ggacaagggtg gaccatgtcg ctggaagggc acacaccgag gccctcaagc 240

agtacaaggt gctggatgcc aaggtcctga gcaaaatccc caggggtgcg gtcaaattcca 300
 aaaagcagaa ctagttagga taagccgcag attgtgaatg cccgtatcat ga 352

<210> 271
 <211> 214
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H6

<400> 271

aattcccga cccgaccac gcgtccactc catgtggaac tatgtgaaca ttttggtgga 60
 tctgctgttg ggtctgtggg ttccgtctcg atctggctgc agcggtcacc tcatcatgtc 120
 atctttgatt ggagtcctga tgcttcacac ggtgagagtc ttgtacgata gatatcaggt 180
 gcacgtggac catatcgctg gttagggaca cacg 214

<210> 272
 <211> 124
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H7

<400> 272

ggtaggctca ggaattcccg aactgaccca cgcgtccagg gatatatatg tgtttccagg 60
 tagttggaga ttcgaaacga accagtgatg tagatttgtt tcatctaaat atatgctata 120
 gttc 124

<210> 273
 <211> 322
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H8

<400> 273

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 tcgtcaattc gctaccctgc gagcaggcat tggcctatgg atgtggccgg aaggctagcg 120
 gaactgggcc tgaggtagac tgaggacaca agccgggagc gccacacct gactgctgac 180

actgtacgag agctgggaca gctacacgtc accagggacg aggaacaagc aacctccact 240
 ttccggtgct cgattatgca agagataatg catgatcctc atgtctgcac agctgatggg 300
 gtgaccaact actggctggc ga 322

<210> 274
 <211> 97
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-003-Q1-E1-H9

<400> 274

tcccggggccc gacccaagcg ttccagccca tgctgacggg acccgaacca tacaatcagc 60
 ttccgttggg ggaaacgtat caggatactg tgcccggt 97

<210> 275
 <211> 349
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A1

<400> 275

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 agaagcttaa gaagatgctg agcgccaacc cagaggcccc actgaacatt gagtgtttga 120
 tggatgagaa agatgtgaga gggtttatta agagagagga gtttgaacac atcagtgcac 180
 ctgtgctggt acgtgtcaaa ggacccttgg agaaggcctt ggctgaagct ggcttgacaa 240
 ctgaaaatgt gcactttgtt gaggttgctg gatctgggtc tcgtgttcca gccataatca 300
 agataatcac tgatTTTTTTT gggaaggagc cgagacgaac catgaatgc 349

<210> 276
 <211> 366
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A4

<400> 276

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catcgcaaag ttcaacacca taggactcga tggccgcgcg ctcgaccact tcaggctcta 120
gctacctggc tacgtttcag attcgtcctt tcatttgctt tggctctctaa ttaataattc 180
caaataataa gcccgcggat ggacctctgt ctgtctgtct gtaatttagt ttccaagttt 240
aggtagtgtt tggttactag ggactaattt ttagtccctc tattttattc cacttttagt 300
tataaattgc aaaatatgga aactataact ctatttttagt ttccatattt gacaatttag 360
ttacta 366

<210> 277
<211> 358
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A6

<400> 277
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gattccgcca gtacgccacc accaccgagc ctggactacc gccgccgccc ttcgccgata 120
tcttcagcgg cgaacagcgc ccaccagatc ccgcccctgc gatggagtcc gtggtgaacc 180
cgaaggcata cccgctggct gatgcgcagc tgacgatggg taccctcgat atcatccagc 240
aggccgcaa ctacaaacag cttaagaagg gagcgaatga agcgacgaag accctgaata 300
ggggcatatc ggagtttgta gtgttggcgg cggacacaga gcctctcgag atcctgct 358

<210> 278
<211> 360
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A8

<400> 278
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cccgagccg gcagccccac caccaccac atggccgcca tgccgggtgg ggcccacggc 120
gccggcgccg cggaccgat gcaggtggac cagccgctcc cccctgccgc cgcaggcaca 180
gcacacgccc ccgcgcagc caagcatgct ggttctatga ttgaaggag tgatccggtc 240
acaggccata taatctcgac aaccattgga gggaagaatg gagagcctaa aaggactatc 300

agctacatgg cagagagagt tgtgggaact ggatcatttg gaatcgtctt ccaggcaaaa 360

<210> 279

<211> 328

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-A9

<400> 279

gggccgaccc acgcgtccga aagcagcgat ccgaagctca atcaattcac tcaaacctct 60

tccccaaatc ttcgattaga ttctcgttga caagaagact agaaccgaac ctgaccatgt 120

cgctgatccg ccgcagcaac gtgttcgata ccttctccct cgacctctgg gacctctttg 180

agggcttccc cttcggctcc ggcaacagca gcagtctctt cccctcgttc ccgcggacca 240

gctcggagac cgcggccttc gctggcgcgc ggatcgactg gaaggagact ccagaggcgc 300

acgtgttcaa ggccgacgta ccggggct 328

<210> 280

<211> 221

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB143-004-Q1-E1-B1

<400> 280

tctagggaca cctgcgttgt cttgttgttg ttgtgncttg gccttttggt gccttggtga 60

caatgtttgc cgcgggttc cgcgggcta tgtgtggcct gccggactt ggtgggggtg 120

tttcgttgtt tccgtccact ttatctgttg cctatcattt ccttagtgga tatttacttg 180

cgccgttagt gttcgatata ttcaacacct tctgaattca t 221

<210> 281

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B2

<400> 281

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gatgaccaag aaggtgttag aaccgtagat gatgataatt tcattgatga cactggagtt 120
 gatccagctg atcgttatgg cagcgataat gagcgacatt cacctggacg ttatgcacag 180
 gctgaggagg gtgaggagga cgatgaaatc gaacgactct tcaaggggtgg taagaagaag 240
 aagaagaaga atgatcgccc tcgtgcagat attggcctta tagtggaaca attcattgct 300
 gagtttgaag tagcagccga agaagatgca aacttgaata ggcaatcaaa accagccatt 360
 aacaaac 367

<210> 282
 <211> 360
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B3

<400> 282
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 atctggaccg cacaatcaag tactacacgg aatgctttgg gatgaaactg ctgaggaaaa 120
 gggatgttcc tgatgagaag tacaccaatg ccttccttgg ctttggggcca gagaacacca 180
 actttgcagt tgaattgaca tacaactatg gcgttgacaa gtatgacatt ggaacgggct 240
 ttgggcattt cgcaattgct aatgatgatg tgtacaagtt agctgagaat atcaaatcca 300
 aggggtgtaa gatcaccgcg gaacctggtc ctgtcaaggg aggatccact gttattgcct 360

<210> 283
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 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B5

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 aaaaaatgaa aaatcacaaa aggggtaatc aataaatttt ggaaaaaaaa aagggggggc 180
 cgccctaggg gttcaaggct tacttgccct tgcattgcaat ttcatacccc ttctagattg 240
 tcccctaatt tcattttccg ggccgtcttt ttacaacttc gtgccgggga aacccttggg 300

ttttcccaat ttaacccctt tgcagcaaat ccccttttcc caattggggg taataccaa 359

<210> 284
<211> 357
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B6

<400> 284

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ggcgacgagc acccaccagg agtcttgaca agtttttcca atggaccaag taccgaatgg 180
aaggcataag gtttcttttg cgaagccaag agtagttgtg ctttcagatt ctgactctga 240
ctctgaaggt tttgtagaag agctaactcc tgttcactca aagtcaaacg ggaaggcttc 300
atctgcgagc ctaaaaactg gtggaaaggc ttcagccttt tctaaagggtg aggcaag 357

<210> 285
<211> 354
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B7

<400> 285

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gccggctgcc agcagccgga gggcccaatc ctatgcatca ataactgtgg tttctttgga 180
agcgctgcca ccatgaacat gtgctccaag tgccacaagg agatgataat gaagcaggag 240
caggcccagt tggctgcctc ctccatcgat agcattgtca atggcggtga taatgggaaa 300
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<210> 286
<211> 359
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-B8

<400> 286

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acgacagctg ctccgacgac gtggaggagg ccgtcgcca cctcaacggc ctcgccggg 120

agcccaccga cgccaagttc ctcgagctca agtcgtggct ctctccacg ctcgccggca 180

ccgccacctg cgaggacgcc tgcaaggacc tgccaagac cagcgacaag gacgacgtcg 240

tcaacttcag cctcgacttc gagaagctgc agcgcgtcac gctcgacctc atcaccgatg 300

cgtcgggcac catgtccgca ggcacgccc tgccaccctc caacgccgga gcgccctcc 359

<210> 287

<211> 359

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C1

<400> 287

gggtcgatac acgcgtccga ccttttcttg tgcgcagccg cagccgctgc ttttcgttcg 60

tcttcacctt acgcgagggc aaaaccaca aaccctctcc ctcccgact cccgcctaca 120

catccagggg cgatgacgct gggtagctcc ggcgccgat cgagcgtcgt cgttccccga 180

aacttcaggc tattagagga gctcgagcgt ggagagaagg gcattggtga tggaacagtg 240

agctatggaa tggatgatgc cgatgacatc tacatgcggt catggactgg taccatcatt 300

ggcctcaca atactgtaca tgagggtcgc atctaccagc tgaagttgtt ttgtgacaa 359

<210> 288

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C12

<400> 288

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aacggaaccc acggaggagg tgggtgtcatt tcctgggata aaggggcaat tgatgcattg 120

aacggcaaca cgggtaatgc tattgggact ggtggatggt aagatttccg ccaatataat 180

atgaactctg tcgggtgcgtg tgtctaattc gtatccgtta cttctccatg tgtactctac 240

actatctcga acatggcttg tgaccattta tacatttaaa cattacctta ttggtggcag 300
tatcaactaa gagatatttg tgttcgaaga ccgaaacata atgcaaaggt atttcaacaa 360
tgtacagggc tgccgctcta aaggatccac acttacgtat gcatacatgc 410

<210> 289
<211> 368
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C2

<400> 289

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ctaggccagg tcattcagct ccaagggtgac cagcgcaaga atgttgctac tttcctagtt 180
caggctggga ttgcgaagaa agagaacatc aagattcacg ggttctaagg gacctgtaaa 240
tgcttgtgcc ctatattgtg tgcctcaaca tattggggag cttgaagcat cgacagttgc 300
tagtcattgc ttacttatat aagaacataa gtagtatttg ctattgtcaa gtgtgccttg 360
cttgatgc 368

<210> 290
<211> 352
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C5

<400> 290

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ccgtacccaa tctaatcgac acccggccga gatgggccgc aagttcttcg ttggtggcaa 120
ctggaaatgc ctggaagagc ccgcgttctt cttccaatgc gcctgtgctt ccaggctcca 180
gccagagca aatcgtaaaa gcccttcata agtttcgtga tgcattgtgt ctgtaggagc 240
agaggagttc gatatccaac ttttgagac ccattctcgt ttgctgcacg aattaacctt 300
acgtttcttg tcatggagct cggggcttgc tcaatctgag catagggttg ag 352

<210> 291
 <211> 357
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C6

<400> 291

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 tggcgagctc cgaccatggt tccaccaccg cccccaagga cgtgccgggc agctacggcc 180
 tgccgctggt gggcgccgtg cgcgaccgcc tcgacttcta ctacttccag gggcaggaca 240
 agtacttcca gtcccgctg gagcgcctacg gctccaccgt ggtgcgcatg aacgtgccgc 300
 cgggcccctt catggcgcg caccgcggg tggtggcggt cctggacgcc aagagct 357

<210> 292
 <211> 360
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-C8

<400> 292

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 cctcgcgggc ctgggcgccc cgagctgat ccgctctcgc gcgtcgatcc cgcgcgccc 180
 tccgcgacc ttgcgctgc tcaccgctg cctcgtcttc ccgctctcct tcgccgtgct 240
 cgcgcactcc ctcttcaccc accccatcct gctccgcac cggggcgccc cccactcggg 300
 gttcgcgccc tggtcgggc tcttcgcgta ccagttcatc tacctcatcg tcctcttcac 360

<210> 293
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D12

<400> 293

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 tacacaaaga cagtcctgct gctaagtatt tgatggagcg tgggtgtggac cggaaggact 180
 tcaactcata tggtagccgt cgtggtaatg atgaagtaat ggcaagggga acgtttgcaa 240
 acattacgat cgtgaacaag tttttgaacg gagaagttgg acccaagacc attcatgttc 300
 ctactgggga gaagctttct gtttttgatg cggccatgag atacaaatct gatggccatg 360
 ctactataat cctcgctggg gctgagtatg gaagcggcag ttctcgtgat tgggctgct 419

<210> 294

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D3

<400> 294

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 ttctcgcggg cgcgggcgcg ggcgcggggc gcgggagcag gcatggcgtc gcaggtcgct 180
 ggggtcaacc cggcgggtggc ggcgccttggg ttcttcttc cgaccttctg ggagatcgag 240
 gtcacgtgcg ccgccgcgat gatcctcgtg gcgccttacg ttgcctacga gctcctcaac 300
 ccgcgctcct cgcaggcggc agcggcgggc gacgccgacg agctcctcgt gcgggggctg 360

<210> 295

<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D4

<400> 295

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 tgtgctcaag acccgtgggt tagataagga atatgagggc aatggtgagg cactgggtga 180
 ggacttctct gttgagccag ctgatgagag gaggccttcc cgtgctctct tggatgttgg 240
 ccttattagg actacaactg ggaaccgtgt ctttggtgcc ctcaaggag ctttggatgg 300

tggcctggat attcctcaca gcgagaagag gtttgctggg ttcaagaagg atgacaagca 360
gctgg 365

<210> 296
<211> 352
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D5

<400> 296

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gaattctttc ttgtgattaa ggcctggcta atttctatto ttcaggtttg cagatcggcg 120
cagtttttggc cgcaaaggcg tggtcgttct cctcgagcat cgatttaggg ttcttcggct 180
ttctatgata aggaggagtt gctggattat tttatcaggg aacagaatgg tgtgattcgt 240
tgattggatt acagtctgga tctctcttgc atcaaattgg tgagcaaggc aaaccacgaa 300
gcatcccgac gaaggcgaag aaatcgccgt tcgtggaggt agaggttgac ga 352

<210> 297
<211> 356
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D7

<400> 297

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ccgcaaccga agcgcgcctt cgccgccgcc cccgcccccg ccgcctctgc gatccccgca 120
aggtcgcaaa catgtctacc gtgctccagc gcccgacccc cggcacgggc cagtgccttcg 180
gccgcaagaa gacggctgtg gccgtgcct acaccaagcc ggggcgcggg ctgatcaagg 240
tgaacggcgt cccgattgag ctcatcaggc cggagatgct ccgcctcaag gccttcgagc 300
ccatcctgct ggcggggcgc tccaggttca aggacatcga catgaggatc cgcgtc 356

<210> 298
<211> 359
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-D8

<400> 298

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cagcagcagg cggcgccgag tagcggtcc ccatctcgag cttgccacca tggctagagg 120
attgaagaag catttgaaga ggctcaatgc cccaagcat tggatgctgg acaagcttgg 180
cggagctttt gctcccaagc catcttctgg acctcacaag tctagggagt gcctgccact 240
gatcctcatc atcaggaaca ggctcaagta tgctcttaca taccgtgagg tcatttccat 300
cctgatgcaa cgccatgtac ttgttgatgg caaggtcagg acagacaaga cctaccctg 359

<210> 299

<211> 254

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E1

<400> 299

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cccagccatg cctcccatgc gcaagtcccc ggcgacgatt gccctgccg cgggggtcccc 120
gaggaagacg cggagcatgg ttgctgctgc tgctgcaggg aagcgggcaa cggagcctgc 180
tccggcgaag gcagtgccgg ccaataagga agacgatgcg gcggttgccg agttgaaagg 240
gatgaagagg ggca 254

<210> 300

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E2

<400> 300

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aaatgtgtac atggcgaagc tcgccgagca ggcagagagg tacgacgaaa tggttgagtt 180
catggagaag gtagcgaaaa ctgttgactc ggaggagctc actgtggagg agcgcaacct 240

cctgtctgtt gcatacaaga acgtcattgg agccccgctt gcctcatggc gcatcatctc 300
 ctccatcgag cagaaggagg agggtcgagg caatgaggac cgtgtaacac tcatcaagga 360
 ctaccgtg 368

<210> 301
 <211> 356
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E5

<400> 301

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 gctgctcggg aatccctcat cctccccacc tgtccgctcg tcagcgtcat gtccggcacc 180
 accccgaccc ctacacctac accgacgcgc ctaccgcgc cgcgcgcgc gccgccagcc 240
 gtcgccccg caggtacga cttctcaac tccaagccac cgcccaacta cgtcgcgggg 300
 ctcgcccggt ggcgcccggt cttcaccacc cgtcgggata tcggaccggc cgcgcgc 356

<210> 302
 <211> 359
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-E6

<400> 302

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 cttcgccaag aaggagatgc ggattcttat ggtcgggtct gacgcccgcg gtaaaaccac 180
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 tgttgaaact gttgagtaca agaacattag cttcacggtc tgggatgtcg ggggtcagga 300
 caagatcaga cctctctgga ggcattactt ccagaacaca cagggtctta tctttgttg 359

<210> 303
 <211> 360

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-E8

 <400> 303

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 gcagcgtgca cgacgtcgtg ctcgctcggtg gctccacccg catcccccaag gtgcagcagc 180
 tgctgcagga cttcttcaac ggaaaggaat tgtgcaagag catcaacccc gacgaggctg 240
 tggcgtagcg cgccgctgtc caggctgccca tctcagcgg cgagggcaac gaaaaggtag 300
 aagatctgct cctgctcgac gtcacgccac tgtctctcgg cctggagact gcaggtggcg 360

<210> 304
 <211> 363
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-004-Q1-E1-F3

 <400> 304

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 tggcgccgctc tccccctgcc agccggattc cctgctttgt tctcaggcag cattttgttc 180
 actagtgtgg tagctttgtt gattggagtg cgcaatggga ggctgtgcgg gaaaggtagc 240
 tcgtgatgac gaagaaaagc ttgattttaa agggtggaat gttcatatta taacaagcaa 300
 tgagggctgg gaccagaaga ttgcagaagc aaacagagat gggaaaactg ttgttgcaaa 360
 ttt 363

<210> 305
 <211> 288
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB143-004-Q1-E1-F4

 <400> 305

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 cggtcacgc acaggacagg acgcatagga agcctatggt tgtattgcat tggagtcggt 180
 taggtgtaga gagcccccc gacacaaggg aaggcgtcaa attttctggt gggttgtagg 240
 gtgtgatctg tctgtataaa agctgtggta aangtggnta atgttcat 288

<210> 306
 <211> 356
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-F7

<400> 306

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 gccgtcgagg tcacgggtgg gctgagatc cccttccacc cgggcaggga ggacaagcct 240
 cagccgccac ctgagggccg tcttctgat gccaccaagg gttctgacca cctgaggcaa 300
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<210> 307
 <211> 359
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G1

<400> 307

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 accgatcgat cagctagcaa gccatctcgc tcgctgcacg aggaaccac tggcggcgtc 240
 gcattgttgt cgctgtagct tgcattgtt ccctaacaac gggccttttc cccttcttt 300
 tccctcgctc cgcctctcgc tctcgtgtg tataaaagcg cgtcactatc gcgctcatg 359

<210> 308
 <211> 409
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G11

<400> 308

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gcccattcat gatatgcgtc atgatctcca tgtaaactga taaggcgtcc cagttcacia  180
tgcgatgcgc aagtgggttcg cacgaagacc cacctgcagc ttatgtcaaa tcaggtgcag  240
aacaatatgc ctgtccatca ccaacaaggt aaacgggatct atcagtctca gatgattgta  300
tattagattg acgaagtctg atcctccggc tcgcaggggt gacttcccct tgacgcacac  360
gcacactcag tagatcagtg ctgatcccaa tgctccaggt aaagtcac   409
  
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<210> 309
 <211> 326
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G2

<400> 309

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gggcgcgaac ttctgtcttc caccacccgt gtctaatacc taggcatttc gatcctcgcg  120
atagtgaaac taggtgctgt actatgatgt gctgtgctct gcacttacta tgaagtaaca  180
tcaattcaca ggttcaagaa tttagtgtg cgcatgtgga agaccctgtc atcaccatta  240
tggcgcactt cgacctcgtc ttcgacgcag acgtacacca gcctcagggt catgtccatg  300
atcacacggc gagacacgag caccac   326
  
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<210> 310
 <211> 353
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G3

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gcgccgagta cagcgaggcc gtcgagaagg ccaggcgcaa gtcgcgcgcc ctcatcgccg 180
agaagagctg cgcgcccctc atgctccgcc tcgctgggca ctccgcgggg acgttcgacg 240
tgtcgtcgag gaccggcggt cccttcggta ctatgaagtg cccggcgga ctggctcacg 300
gcgccaacgc ggggctggac atcgcggtgc ggctgctcga gcccatcaag gag 353

<210> 311

<211> 359

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G5

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cgaaaatgat gatgatgatg ggagagagag cgcacgcgcc tccgtggcag cactcgccgg 180
cggccagcgg cgtcacggac gcggacgacg cgtctccgta cgccctccta gcggcgcttc 240
agcattacct gccgtcgaac gaggtggcgg cgtacgacga agacgacgag gaggcggccc 300
tgggcgcggc gaccgccgcc gtcgacgcgt acgcttcgga cgagttccgg atgtacgag 359

<210> 312

<211> 273

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G7

<400> 312

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tgccccggtg gtttggttgt agaattgttg tataactgaa gatcccgctg gctatgtgct 180
tgcttgtgta cagtgtcttg ttctctgaca atacaatatt gggagggaat actaggcgctc 240

tgtacgtagg cttggatgga aataatatcc ggt

273

<210> 313

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-G8

<400> 313

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cactgcatgc agccgccaca cacatgctga cagcagacaa gctgctagct ggcaataggt 120
tcgccctggc gcagctctga cgaagatacg tcgcagcgcc gttctcgtca ccgtcgtgct 180
ccactcggcc tcagcttggg ctgtctccgc gtttcacctc ggaagggacg aaagcggtct 240
cgtgaagggt gtgcgtccgg cgctctgcta gggggccaaa gctgtgtatg ccgtcgtgctg 300
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<210> 314

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H1

<400> 314

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caccagggga gaaagaggcc aaaagggagg ggagagtgtc gtcattggctt ccattgtcgc 120
ttccaggagg gccgttcttc tagttcgcgc tctggagaag ctcatcgcag cgtcctccgc 180
tcccgggact ggctccgccc tcaggccggt ggcagtcgcc ggcggcctcc gcggctacaa 240
caccggcgct ccgtccgac gctacgaagg ggccgagtcg gaagacgata gcgtccgcga 300
gtacgatggg cggcactgcg gccgggacta cgctgtgccc agcctgttct catgtagtcg 360
tcattct 366

<210> 315

<211> 337

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H2

<400> 315

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agtccatggc gctcaagtgc gccctggacc tgcgcacccc cgacaccatc gaccgctgcg 180
gcgggagcgc caccctgggc gagctgctcg ccgccagcga gatcccggcg tccaaccacg 240
actacctcg gcgggtcatg cgcacgctga cagccatgcg catcttcgcg gccagccacg 300
accccgccaa ggccgacgac gcggccgctc tagagga 337

<210> 316

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H3

<400> 316

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cgccccgacc tcgtcacctg cacattctcg ggcaactgctg ccgtcacctg cgctgtctcc 180
gcgccaaccc gcttctctgt cctcaactct gctgacctct caatcgacag cgctccatc 240
cgtttccggg atttggcgcc taaggagggtg gtgtttttcg cggacgacga gatcctgggtg 300
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<210> 317

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H4

<400> 317

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gccggccctg cagctcagta ttgactgag actggtggtg gagctgctag cagcgagcct 180

gctacttccct ggtccctgacg gtgcgttcag acctcagacc agtgccgacg acgagctgtg 240
aggagagggc aaggaaacaa gcctgtgagg aaggcggcga tggagaggta cgacgtgac 300
aaggacat 308

<210> 318
<211> 359
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H5

<400> 318

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gacattgact tactcaatcc accggcagag cttgagaagc taaagcaca gaagaagcgg 180
ctagtccagt cccccaactc cttcttcatg gatgtcaagt gccagggctg tttcagcata 240
accactgtgt tcagccactc ccagactgtg gttgtgtgcc caggctgcca aactgttctg 300
tgccaacctc ccggtgggaa ggccaggctc accgaggggt gtccttccg tcgcaaggg 359

<210> 319
<211> 155
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H7

<400> 319

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gcaaccatga gttgatgggt atcatctgca tcaca 155

<210> 320
<211> 135
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-004-Q1-E1-H8

<400> 320

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 gcttggcttt gttgg 135

<210> 321
 <211> 432
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-005-Q1-E1-B10
 <400> 321

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 tcaaggacgt gccggggaac gagaacgacc ttcacctcca cgaactcgcc cgcttcgccg 180
 tcgatgagca caacacgaag gccaatgtc ttctgggggt cgagaagctt gtgaacgcca 240
 agacacaagt ggttgctggc accatgtact atctcactat tgaagtgaat gatggccaag 300
 tgaagaagct ctacgaagct aacgtctggg acaagccatg ggagaacttc aatgagctgc 360
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 cagcctgagg ct 432

<210> 322
 <211> 402
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-005-Q1-E1-B12
 <400> 322

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 accggtgaca gcaggtcgag catcttcgac gccaaaggccg ggattgccct gaacgaccac 180
 ttcataaagc tcgtctcttg gtacgacaac gagtggggct acagcaaccg cgtcgtcgac 240
 ctgatccgcc acatgttcaa gaccagtag agagagatat ttctgcctcc ctatcgaggg 300
 tcgtccccga tggcctttgg tcgcagacca tctttgctgc ttgtctatgc tgagaataaa 360

tgtgaacggt gccctggac gctggattca tgctggtttt gg 402

<210> 323

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B2

<400> 323

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cgcaaacgcg tgccaacgct ctgcgctccc atcctcccg tcttgaagg tcttctcaa 120

catggcctcc aagacggata agttccgcct ccaggcggag atcaacaagc tgctatcgcg 180

catcatcaac agcttctact caacaatgag atcttcctta aggagctcat ttcacactcc 240

tctgatggca tggataatat caggttcgac agtttgacgg acatgagcaa gctggatgcc 300

gacccggagc tgttcatcta catcgtctct gacaagagca acaatattct gacaatcatt 360

gacattggca ttggtatgac 380

<210> 324

<211> 310

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-B5

<400> 324

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agttagatct agggactggg tgtcatcgcc agccattctc gccctgttcg acacggccgt 120

atcgatcttc ctctatctga cgctggtgct agactcactc gcagtcgcag tcggctatgc 180

gactgtcgga cgggcacaca acttatgcac ggtgtgcagc catcaatcgc gtcgacgagg 240

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ctgtcatgct 310

<210> 325

<211> 439

<212> DNA

<213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB143-005-Q1-E1-B7

<400> 325

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 gtggaggtga ccctaattggc ggcgccacaag ctttccagct caaccccaat gttccactcc 180
 tcaccaacgg gcagatggtg gatgacatcc caccggagca gcacgcgctg gtgccttctt 240
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 tgcaaccag gtctatggac ccatccaagg atcttgctgc atatgggtat ggtagtgttg 360
 cttggangga acggatggag aattggaagc agagacaaga gaggatgcac cagacgggga 420
 atgattgtgg tggatga 439

<210> 326
 <211> 141
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C11

<400> 326

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 gcgggcggcc gccctagagg a 141

<210> 327
 <211> 177
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB143-005-Q1-E1-C4

<400> 327

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 tagtatatag gagtggaatc gtcattgata aactgtgtcc ttttgttcag agtgacaccc 120
 tctactgtat actgcacacg aaccaccgc tgccggcgcg ccgctctaga ggatcac 177

<210> 328
 <211> 81
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C5

<400> 328

ttccccggggc caccacgcg tccgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60
 aaaaaaaaaa aaaaaaaca a 81

<210> 329
 <211> 212
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C6

<400> 329

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 agtggtcggt cagtactctt cgataatgcc acggagcttc tggtcacagg gtttcgtttt 180
 acgctatcgt tacggggagc acgttctctt tc 212

<210> 330
 <211> 456
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-C7

<400> 330

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 ctcaaaaatt aaaaagttcc ttaaagccca tgctcgcttt ttgaaagcac aggaagaatt 180
 gaaaaggtca caagctcggt ttgagagact cggtgattta cttgcttcag atattctgaa 240
 acgtggtgct aatgaagaag tttctagtat caatgttgat gaagatccaa atgttcctta 300
 tgaaaggagc ccaaatgctg ctatagctaa gaagagatca ataccatact caacaagtga 360

agaagcgaaa gccgtgaaga aaagaagaga gcgggactct gacacaacta ggccagataa 420
 atataggttt gaaggtacta ttgcaggatt tgaaaa 456

<210> 331
 <211> 418
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D12

<400> 331

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 aggcctggag gaagaagcga aagtatgagc ttggtcgcca gccagccaac accaagttgt 180
 caagcaataa gacagtgagg agggtcctgt ttcgtggagg taatgtgaaa tggagggctc 240
 ttgccttga tactggtaac tactcatggg gaagtgaagc tgttaccgcg aagaccgta 300
 tcctcgacgt ggtctacaat gcatcaaaca atgagcttgt gaggacacaa acccttgtga 360
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<210> 332
 <211> 441
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-D5

<400> 332

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 ccgctttttc gggagattac tttctatact ctccatttcg attttgagtc gggtcgggat 180
 cttcccttgt tgattagtgc cgctgctttg cgctccgtg ctgcagata ccttgggctg 240
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 tcggtttgcg gtttagtctt cctgcgattc tagttttcgt gtggatcctg tttcgtcctc 360
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 cgtcgggtgg cgaggagttg g 441

<210> 333
 <211> 452
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E11

<400> 333

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cccaatgccc ccgcccaggc aaccagctta ttgaagcatg taactggcac cgcaagtttg 180
caaggcaatg cggatagctt gttggatggt acagtcagac attttggctc agcaccgtct 240
gccagcctg aagaaaatgg gttcaagggc cacggcatgc tggcgccctt tacagctggc 300
tggcagagca atgatttgca cctctgac attgagagat ctgagggttc ctatgtctat 360
gacattaatg ggaacaagta tctggactct cttgcaggat tatgggtgcac agcttttaggt 420
ggtagcgagc ctcgattact caaagcagct ac 452
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<210> 334
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-005-Q1-E1-E5

<400> 334

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tttttttttt tttttttttg gttttttttt ttttttggtt agggcaaaaa ggggtttccg 180
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ttacgtaggc caccctgtcc cagcataggc acgattaaat gtcccttacc aggctgttca 300
cgttgcgctt ttcagggggg tacacgtcca taatttttgt ggggcattcg tccttaattc 360
gatggctgca atggccaact ccatgttcat tttggaatcc tggtcctctg ccctatgagg 420
cgtgcatgtc ttcaaagggt 440
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<210> 335

<211> 336
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-001-Q1-E1-A1

 <400> 335

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 ggtgtgcgtg cagtgcggga cgcgagcaa cccgtgccgg tgcaagggtg tggggccgac 240
 gctggggttc gtcgcgttcg tgggtggccg ggtcatcgaa tggccgctgg gggccgccgt 300
 gtacctgttc cgccaccgca agggacgacg catcat 336

<210> 336
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-001-Q1-E1-A10

 <400> 336

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 ggtggccccg cagcgctgt tccgcgcgc cgtgatggac tggcacaccc tggcgcccaa 180
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<210> 337
 <211> 424
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB143-001-Q1-E1-A12

 <400> 337

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tttc 424

<210> 338
<211> 326
<212> DNA
<213> Zea mays
<223> Clone ID: LIB143-001-Q1-E1-A2
<400> 338

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caattgccgc agcaagccat gtcggcgcca ctgaccggct tagtgattgg tataatttgg 180
tgtggcagca gccaggatta atgcgctggc cttttatctt tactactagt ttggtctcgt 240
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<210> 339
<211> 362
<212> DNA
<213> Zea mays
<223> Clone ID: LIB143-001-Q1-E1-A4
<400> 339

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 gc 362

<210> 340
 <211> 51
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-A5
 <400> 340

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<210> 341
 <211> 351
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-A8
 <400> 341

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<210> 342
 <211> 398
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB143-001-Q1-E1-B1
 <400> 342

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tgggcagagt gccggggctg ttttcttgca catgccagat ttgctcacia caatgacttc 300
agcaccttct gcattcctga agccaaaatg cgctctctgg gactgcccc a ggctgctat 360
tggatcagaa agatggcata attattgcag catgtatc 398

<210> 343
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B10

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ggtttacagg atggacaaga tcaaggcgga gatgaagaac ggcgtgctca aggtggctcg 180
gccgaaggcg aaggagcagc agcgcaagga cgtgttccaa gtcaacgtcg agtagatgtt 240
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attcctctct ctcaatctga tctggattct ggaatcagat ttctcttctt tcaattttct 360
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gtgga 425

<210> 344
<211> 453
<212> DNA
<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B11

<400> 344
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aatagagacg atttccttgt tcagtatgat gctgcaaagt tctttgtcat taaatcgtac 180

agtgaggatg acatccacaa gagtgtaaaa tacaatgtgt gggcaagcac aaccaatgga 240
 aacaagaagc tcgatgctgc ttatcaagaa gctcagtcga agggttctgc gtgccctata 300
 ttcttggttt ttctcagtga tacaagtggg cagtttggtg gtgttgctga aatgacaggg 360
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<210> 345
 <211> 142
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B12

<400> 345

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 atttgtgttt ttctgcgtta aa 142

<210> 346
 <211> 379
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B3

<400> 346

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 catggacaaa aagaacaaca ttctgtaatat gtctgttatt gctcatgtgg accatggcaa 180
 gtctacactt acagattccc ttgtggcagc tgctgggatt attgcccagg aagttgctgg 240
 tgatgttcgc atgactgata ctogtgcaga tgaagccgag cgtggcatca caatcaaata 300
 tactggatc tctctttatt atgagatgac tgatgagtca ctgaagaact acaagggtga 360
 gagggatggt aaccaatac 379

<210> 347
 <211> 371
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B4

<400> 347

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gcgaacatat ggcggatgac tcgttcgacc tccccagcgc tagcgaggag gaggtgatgg 180

gaggcctgga tgaggacgag gccatgaagg acctcgagac cgggatggac gatgaggact 240

at ttgccacc gacgatgaag gttggggagg agaaggagat cgggaacgag gggctcaaga 300

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tgcattacac t 371

<210> 348

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B6

<400> 348

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gtcttagtat atatggttca taatacatat atattggaac tgagataata tatgcaggag 180

tacagtgttg atccatggac tcggaaggag ttgtagcagc aaaggtggca gatgagacta 240

ctaaaccggc aatccaagaa gacggcgccg agagcaaggc cgggatgact gatctgctga 300

tgctgaccga caagtcgcag ctgcaggcgc tggcgatgct gctgcggaac aacgaggagc 360

tcatgatgag ccaggcg 377

<210> 349

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B7

<400> 349

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 gcgggtacta cggcggcggg ggcatcgcaa cgccggggta cgctccggcg gtcccgtagc 180
 ggatgtcgca ggtgaacatc gagggcaacg ggtgcggggc ggcgctgccg ccgcagccga 240
 ccgtgaaggt gtactgccgc gccaacccca actacgccat gagcgctccg gacgggaagg 300
 tgggtgctggc gccggcgaac cccaaggacg agtaccagca ctggatcaag gacatgcggg 360
 ggagcacgag catc 374

<210> 350
 <211> 441
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB143-001-Q1-E1-B9

<400> 350

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 tacgccaccc cacctcagct cgcgcgcgct cgccgcgggt tccgcgtgct agtgctctcg 180
 ggagctcgga tcagaggggc gggctagggt tcgccaatcg ccagcgtggg tgctgccgtc 240
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 gctggacgcg taccccaagg tgaacgaaga tttctacaag cggacgctct ccggaggcat 360
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<210> 351
 <211> 451
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-056-Q1-E1-E4

<400> 351

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atanggaatc tgcagccagc tcacatggat tttaggttct tctctcttgg caacctttgg 180
gccatagctt cgtctctaac tactccaaaa caagctgagg gaattcttag ccttattgaa 240
gaaaaatggg atgatcttgt agcaaacatg cccctgaaga tatgcttccc tgcaatggaa 300
gatgatgaat ggcgcattat tactggcagt gatcctaaaa ataccctatg gtcatatcat 360
aatggtggat cttggccaac cttattgtgg cagttcacat tggcctgcat aaaaatgggc 420
agaccagaat tggcccgag agccattgct g 451

<210> 352
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E7

<400> 352

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tatggggcaa gccttccac ggcttgtcct cctcgccctc gtggcggttg tgtctgccgg 120
cctcttcccg caagcgtag ggaacggcaa gggcaagggtg catggcgggcg gtgccgtcaa 180
cccgctggtt gccggcatct gctctcgcg cccattccca gaggtttgca cggccacagc 240
cgggcgccat gcatccaagt acccggtcat cgaccatttg gccgtgctga acatgcaggt 300
ggcgcattc gccaaagcga cagcgcaggc gcggaagcac gtcgcggtgg cggcccgcac 360
tattccaccg ccgcaggcac aggcctcag aacctgcgac acgatgtaca tgaacacgca 420
ggacgccatc ggcg 435

<210> 353
<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E8

<400> 353

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gccttccac ggcttgtcct cctcgccctc gtggcggttg tgtcgccgg cctcttcccg 120
caggcgtag ggaacggcaa gggcaagggtg catggcgggcg gtgccgtcaa cccgctggat 180

gccggcatct gctctcgcg cccattccca gacgtttgca cggccacagc cgggcgcat 240
 gcatccaagt acccggatcat cgaccatttg gccgtgctga acatgcaagt ggccgcgttc 300
 gccaaagcgca cagcgcatgc gcggaagcac gtcgcggtgg cgggccgcac tagtcgagcg 360
 ccgcagggac aggcctcag aacctgcgac acgatgtaca tgaacacgca ggacgccatc 420
 ggcgcgcgcg 430

<210> 354
 <211> 472
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-056-Q1-E1-F1

<400> 354
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 catgaccgac atggtcaagt tcctgcacga ccacggcgcy cccttcgtcg tcaacatcta 120
 ccccttcctc agcctgtacc agagcgacaa cttcccttc gagttcgct tcttcgacgg 180
 cggcaagaac atccaggaca agggcgcggt cacctactcc aatgtgttcg acgccaacta 240
 cgacacgctc gtgcacgcgc tgaagaaggc cggcgtgccc gacctcaagg tcatcgtcgg 300
 cgaggccggc tggcctaccg atggcaacaa gtacgccaac ttcaagctgg cgcggcggtt 360
 ctacgacggg ctctcagga agctggccaa gaacgaaggc acccgggtcc ggaagggcaa 420
 gatggaggtc tacctgttcg gcctattcga cgaggacatg aagagcatcg cg 472

<210> 355
 <211> 367
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F10

<400> 355
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 ggtcgccatg ctacgggtgg ccgtgatgt cgccaacgcc ggcaagcga atcctgtgac 120
 gcctgctggg cgcgtgttac acgatcatca cggtaagttc acaggcgggc cgtggaaaca 180

ttcggacgcg accttctact gctggcgggg caggtccggc acctctgcgg gcgcgtgcgg 240
 gtaaagcgac acgtacgcgc aggggtacgg tgtgcaaacg gtggccgtga gcacggtggt 300
 gtttggcgac aggacggcct gccgccgggtg ctacgaagtg cgggtgcgtgc acagctccag 360
 cgggtgc 367

<210> 356
 <211> 256
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F12

<400> 356

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 cggcgttggt tctgtgcctg cttctggcga ccgggccgca ggaggccgcc ggccgccagg 120
 ggatgctgtc gtatgataag ttgctcagct gcaagggtgt gggcaactgc gacaagaaca 180
 ggggccccgg ggccaccgc ccggggaagc ccgtaaaca gtacaccgc ggctgcagcc 240
 cgctgacccg gtgccg 256

<210> 357
 <211> 450
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F2

<400> 357

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 accaaataag gtcccgccct tttccgacat tcacaggggg gacaggaaat cagcggccat 120
 ggctcgatt ccggcgacga cttcgccgt catcttatcc gtctcttct gtgccgcggc 180
 tggcaccgcc gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgcga 240
 cacctgccgc gccgggttcg tgaccaatgt caccgagtag atcgccggcg ccaaggtgag 300
 gctggagtgc aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggtagccga 360
 cgggaacggc acgtacacga tcgagctcaa ggacagccac gaggaggaca tctgcgaggt 420
 ggtcttggtg gagagccgc gcaaggactg 450

<210> 358
 <211> 442
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F6

<400> 358

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gaggcggcgg cggcggttac cgcggtgccg cctgcagggtg ccaagacctc cagcagcaac  120
gatgcccggc acggcgccat gggcagcgtg caggacgagc cgcggcagca ggcgccgat   180
gactatcacc accccgagat cgtccccgag aagatcatac acgaggacgc gttgccggtc   240
gttgctgcgg agaaggagac tgccgccgcc gccgcaacct cgaaggagga ggaggagggtg  300
gagtcgcca agaaggagc ggctctgtcg ccggtgccgg aggctatcgt catcgccaca   360
gccgcaacct cgaaggagga ggaggaggag gtggagtcgc ccaagaaaga agcgggctctg   420
tcgccggcgc cggagcctat cg                                     442
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<210> 359
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F7

<400> 359

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tccaagatct tcaacgacga gtccttcgca aagatgaaga ctggtgtccg gatcatcaac  120
gtggccaggg gtggagtgat cgacgaagac gctctgggtc gggcgcttga ctccggcaaa   180
gttgcccagg cggctcttga tgtcttcacc gtggagcccc cgcccaagga cagcaagctg   240
gtgttgcatg agaatgtcac tgtaacaccc caccttggtg caagcactgt cgaggctcag   300
gaaggcgtcg ctatcgagat tgccgaagcc gtggttggtg cgctgagagg ggagctcgca   360
gcaaccgctg tgaatgcgcc catggtccca gctgagatcc ggtcagagct ggctccatat   420
gtttctctgg ccg                                     433
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<210> 360

<211> 159
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-056-Q1-E1-F8

 <400> 360

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 cccggcgccg ccggcggttg tggaatcgat tgaaccggtc atcccggaga atctaaggac 120
 gttggtttca cctcacgttt ttgtgcatgg aatatgagg 159

<210> 361
 <211> 444
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-056-Q1-E1-G1

 <400> 361

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 aatcaccgcc ctggctccta gcagcatgaa gatcaagggtg gttgctcctc cagaaaggaa 120
 gtacagtgtc tggattggag gatccatcct ggcatcgctc agcaccttcc agcagatgtg 180
 gattgccaag gctgagtacg acgagtctgg cccgtccatc gtgcacagga aatgcttcta 240
 attctttggg cccaagagat gcaaagccga gaggagccat tategccagc ctcccgcccc 300
 gtttctttct ccttttggtg ctgtttcttc attagcatga acaaagtttt ctgccggtct 360
 gtcggcagcc gctttctcct attcatcaag actgtaatgt ctattgttgc tacctaatgc 420
 ttctcacttg tcattttgga caca 444

<210> 362
 <211> 438
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-056-Q1-E1-G10

 <400> 362

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atcaccgcgc aggtgcggca ggaggaggac agcagcggct tcgtcttcct caagggcaag 180
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 agcggcagca ccgacaaggt gacgctcgcc gagttcaact gcactggggc gggcgctgac 360
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 accatcgact tcatcaag 438

<210> 363
 <211> 298
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G11

<400> 363
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 atcaacgagc aggtgcggca ggaagatgac agcatcggcg tcgccgtcct caaggggaat 180
 gtataatgtg tcgaggaagt atagccgtga ctgcgtcacag cgccggacgc gcacgtcatc 240
 atcgctgtga ccggagtctc cagcacgatc cagacggccg gcggggcagc gatacgcc 298

<210> 364
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G3

<400> 364
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 gaagaggagc cgccaccggc gctgcccagc cgcccgacgg ggcgaggcag actcccggcg 300
 ctgcataggc ccggcggcac agcagcggct ccgtggatcc accggccatc cccggtaccg 360

cagccaacgc aggaagacga tcaggagaca tgtctggctg gtcaggagct ggaaagacgg 420
gcgggc 426

<210> 365
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G5

<400> 365

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gggtgtctgt actgtacata catggagacg gggatggtgc tgtaaattcg acgtagagtt 360
ggtgtggttg tgcaaacatt ttgggaagcg cgagggtcgc ccggcgact gtgctcgagg 420
cattttcttc gtgt 434

<210> 366
<211> 464
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G7

<400> 366

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gttcagattc ttgaggaaag cgagacgaag gatggcacgt gtttcaggga ggctgtccta 180
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gagtagccat gccatgcat gccttgataa tgggtaaagc gacacagcag gaggacggtg 300
aagaatgagg agagggtcac ggataaggaa gagagtcaat gcttatcgcc gagtctccag 360
ttcaagggtc tctgctgtaa tagcgataga tgcgccgagg tgtgcatgaa gtgagagctt 420

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<210> 367
<211> 442
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-056-Q1-E1-G8

<400> 367

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caaggccggg tgtgacgagg tcacggggcc actccacatg agcatggagg actgcatgaa 180
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ttgcgtatgc aactgtgcg tgctgccc caaagttcga caacacaccg atctcgatgg 360
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ccacattata tataagaaat ac 442

<210> 368
<211> 477
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H1

<400> 368

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ccagctgttg ctaatagttc tgcaaaaaca aaggcaacaa cagatgatgg atggtttttg 180
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gtgttggcag cactcttcat atggaagtca acatcacgat aacaaaaatt tacttgaaat 360
ggaagtcagg gtaaggggtg aaatgtcca gattcaacat gaaatatatg aactgcagaa 420
gttgggtgaa agttgtattg catccaagt aaagatgcag cactccatta aagaaga 477

<210> 369
 <211> 196
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-056-Q1-E1-H3

 <400> 369

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 aagtaatggt caactctaac actgcttgcc aaaaagaaaa agaaaggaga aaaaaaagg 180
 gggccgctct agagga 196

<210> 370
 <211> 442
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-056-Q1-E1-H5

 <400> 370

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 cgttcggtc cggaacaacca catcaagtcg cgatggagat gaagaaggtc gcctgcgccg 180
 tcctcgccgc cgccgcctcc gccaccgtgg tctcgccgc cgaggccccg gcgcccgcgc 240
 ccaccagcgc ctctcggcc gcgttcccgg ccgtcggcgc cgtgctgggc gcctccgtgc 300
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<210> 371
 <211> 462
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-056-Q1-E1-H7

 <400> 371

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 tgaacaagcc ccccttcaat agcatgggcg catgcggcaa catccccatc ttcaaggatg 360
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<210> 372
 <211> 425
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-056-Q1-E1-H8
 <400> 372

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 aagtaaccac acaaatcaac aagtggacaa tcaattggct gggggatttg acaagctatt 180
 gctagacagt ctttacgaag acgaggcaag gaggcagcaa atagccagtg tgacctacac 240
 tggaaagtact gcagcaaacc catttgacca cagtgatcca tcttgcaaag tcagcccatg 300
 ggcagcgccg ctcttgacga gcttccgctg ggggccaaga gtcaccac ctccgacgcg 360
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 gacga 425

<210> 373
 <211> 437
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-056-Q1-E1-H9
 <400> 373

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tctccgtcga ggcgtccggg ttcattctgca agaacaatggg gttccacaac acggccggcg 180
cggagcggca ccaggcgggtg gcgctccggg tgcaggggga cctcgcgggc ttctacaact 240
gccggttcga cgcgttccag gacacgtgt acgtgcacgc gcggcggcag ttcttccgca 300
actgcgtggt ctccggcacc atcgacttca tcttcggcaa ctcgcgggcg gtgttccaga 360
actgcctcat catcacgcgg cggcccatgg acaaccagca gaactcgggt acggcgcacg 420
ggcgcaccga cccaac 437

<210> 374
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A10

<400> 374

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gagtatatac aagagcetta gttctgttac tgtagagtt ggacatgggg aggcagcacc 120
gcaggagatt gagtgcgtgt tgccttaagg gtagactgcg caggtgaggt gacaaagagc 180
atgcactgca ctgcactgca ccacatatgt gcatcgaagg ttgaagacga ccagcacctc 240
cggtcagaag agaggaagga gaggcggctg gagaaagaga gccaggtcag caggggtgttc 300
aaaccgccgg cggtagcaac gaatcttcct ctttttcttc ttttgcttga atttatgcct 360
tgtgacgtgc atctggaggc acgactgatc acaaaagaat acgagttttt ttaaagtaac 420
gcagcgcgaa a 431

<210> 375
<211> 411
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-057-Q1-E1-A11

<400> 375

acgggccgac ccacgcttca acggacgcat aggctaata acaattcctt gtgcaggttt 60

cagctgtctc aagattgaag catgagaatg ttgtccaact cgtcggatac tgcgccgaag 120
ggagcaccgc cgtccttgct tatgagtatg caactagggg atcattgcat gatatactcc 180
atggtaaaaa ggggtgtcaaa ggagcccagc cagggccagt cctgtcatgg atgcagcgag 240
ctaggattgc cgtatgtgct gctcggggtc tcgagttcct ccacgagaag gccgatactc 300
gagtgggtcca ccgcgacatc aagtcaagca acatactgct ctttgaccat gatgttgcca 360
agatcgggga cttecgacatc tcanaccagg cccctgacat ggctgcgcgc c 411

<210> 376
<211> 408
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A5

<400> 376

aagtcccagg ccgacctacg ctgtcaagga ctggccggac gctaaagcga catggtatgg 60
caagccgacg ggtgcccgtc ccgacgataa cgggtggctgc tgctggtaca acgacgtgaa 120
caagcccccc ttcaatagca tgggcgcgatg cggcaacatc cccatcttca aggatggtct 180
gggttggtggg tcttgcttcg agatcaagtg cgataagcct gtggagtgtc cgggcaagcc 240
cgtggtggtg cacatcacgg acatgaacta tgagcctatc gcggcgtacc acttcgattt 300
atcacgcact gcgttcggcg ccatggccaa gaagggcgat gaggagaagc tgcgcaaggc 360
tggcatcatc gacatgcagt tccgaatggt taagtgaag tacgactc 408

<210> 377
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A6

<400> 377

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ctcctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg catcgatgcg 120
aaagcgtccg ggcctggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240

aagcagacaa tctcatacc caagggcgac ttccttgctg gacaactcaa cttcacaggc 300
 ccttgcaagg ggcacgtgac catccaagtg gatggcaatc tgctggcgac cacggaccta 360
 agccagtaca aggaccatgg taattggatc gagattctac gcgtggataa cctgggtca 418

<210> 378

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A7

<400> 378

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 gatgacgtca acgtcgagta tagcggcacc aacaacaaga ccatggctat atgcacgaac 120
 gccaaagggca gcaccaatgg ttgcctcaag gagcttgcat gcttctagac cctccgtcga 180
 ctgacccatc tctctagtta taatttttct ctcgtccttg cattgcataat tagttgctat 240
 ccattggtaa cgcacaacag tcctacgaca aacatccaac atctatatta tgttcgacag 300
 tgtaacaccc tgaacttttag ggtataaaat ttcttcttta aatgcaaacc aaattcaggt 360
 gttacctctt gtctctctct cgatcatttc cttttgatta aaagtaagtg aa 412

<210> 379

<211> 338

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-A9

<400> 379

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 gcccgagcat ctgggacaat ctgctgtaag gttcattgct agatggagtc gtccgtggac 180
 tgctactgat tataattcgg aagcatgagg tggttaagaaa cttgagcgta gctaaccgac 240
 atgttcacag gctgaaccgt gagagtggct gcgcattatt gtacactcag cttgagacac 300
 attgccattc ggaagagctt gcacgattca tcgatgtt 338

<210> 380
 <211> 431
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B10

<400> 380

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attcacgggc cgacgcacgc gtccacaccg atctcacgct ctctctctct tcctccgtcg 60
cgtcggggtcg gcgtcgccat cgccggccat gggttgcggg ggctccaagg aggccgtggc 120
caccggcaac accagcgccg gcagcaaggt cctccggagg aagccctcct ccgtctccac 180
cggcgcaagc cacacatcca ccacgtcgcc gtcgtcctcc ggcgtcgtcg tcaaggacgt 240
cgtgaaggat gcggcgggcg ccggcggaagt gatgacgcc gccgacgccg aaaagcctat 300
ctctgtcgac cccaaggcag acgccatcgt ggtgatggac gccaagaaag aggagggcat 360
caacaacgtg agcgtggagg aggatctgcg tcctgaatcc accatggtcg acgacgcgct 420
tgctgtggaa g 431
```

<210> 381
 <211> 430
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B11

<400> 381

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agctaagcag gtctgacagg atgtcgtggc agacatacgt cgatgagcac ctgatgtgcg 120
agatcgaggg ccaccacctg acctccgctg ccatagtcgg ccacgacggc gccgtttggg 180
cccagagcac cgcattccca cagttcaaga cagaggagat gaccaacatc atgaaggact 240
tcgacgagcc cgggttcctt gccccgaccg gcctcttcct cggccccacc aagtacatgg 300
tcatccaagg cgagcccggc gctgtcatcc gcgggaagaa gggatctgga ggcataactg 360
tgaagaagac agggcaagcg atggtggtcg gcatctacga cgagcccatg acccccggcc 420
agtgaacat 430
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<210> 382
 <211> 306

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-B12

 <400> 382

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 gatgtcgtgc cacagatact tccacaaccg actcatatga cgacgattaa tggccatcac 120
 ctgcactccg ctcggaatag tcggccatga aagacgccgt gtgggcccga agcaacgcat 180
 tcccaaagtt cagaagacac gagatgatca agatcactga aggacttcga cgagccccgg 240
 ttccttgac ataacgggat ctctgtccga cccaccaact agatgggcat ctcaacgcga 300
 acccgg 306

<210> 383
 <211> 151
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-B4

 <400> 383

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 gcaccatcat cgactcagc tacgtctata gc agct caacggtata c ctatttc 120
 attggatcat ggaccgagtg ataaggatca t 151

<210> 384
 <211> 58
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-B5

 <400> 384

 aacaccctat agtgagtcgt attaagcaga acaatggccg gccagaggca gccacggc 58

<210> 385
 <211> 322
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-B6

<400> 385

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ctggtacaac atggctgggtg atggcatgga ggtatctgcc agcgggggtg gcggcggcaa 120
caagcagccg cagatcagcc ttttggggct gttcctcgtc tgcgtcgcca tggccttggt 180
caccgtcctc agctcctggt ccctcggcga catccggggc aacgtgcacg acgccgccgc 240
cgtggataag ggcctcaaga ccagcgcgct cgccatcttc gtcttcateg gttccatt 300
cccggctcta cgcagcgttc cg 322

<210> 386

<211> 108

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B7

<400> 386

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ccaggcctcg ccagtcggcg ctcccagcgt cgctgacagg aggagcaa 108

<210> 387

<211> 179

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B8

<400> 387

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acatcaccat cacggaggca ggtgtctggg tcaacgctaa ggggagttgt ttgctgagc 120
ccaaccagtg cccgagatct gagactgttg gggatcgtgc aggggtccaca acttgatcc 179

<210> 388

<211> 121

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C10

<400> 388

cacccaatag tgagtcgtat tacgagtgtg gcgccatggg tggetgccac tctgctcatc 60
gctggcaciaa cgctgaagat tctgcgccgc ggatgccggg gtgacgtac cttcctcgcc 120
g 121

<210> 389
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C11

<400> 389

cacgcgtcca gcgccccggg ccccgcatc acggaatcct accettacca accctagcct 60
ccattggtcg ccgtctcggg ccatggcagg gccggcgccg gatcgggccg ccctgactgt 120
gggtccgggc atggacatgc cgatcatgca cgacagcgac cggtagcagc tcgtgcgcga 180
catcggtccc ggcaacttcg gcgttgcccc cctcatgcgc gaccgcccga ccaccgaact 240
cgtcgccgtc aagtacatcg agcgtggcga gaagatagat gagaatgtcc agcgcgaaat 300
aattaacccat agatcattga aacaccctaa cattattagg tttaaagagg ttattttaac 360
accgacccat cttgctattg tcatggaata tgcctctggc ggtgagcttt ttg 413

<210> 390
<211> 311
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C12

<400> 390

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cattgcgtat gcacactgtg cgtgcctgcc caciaagtgc gacaacacac cgatctcgat 120
ggatttgtaa tcgtgtccac tcgatcgaga gatcgatcga tgcttggttat tatatttgta 180
ttccacatta tatataagag atacagatta aattaaattt attccaaaat gcacgaacgc 240
cgcaacaaag aactcatcac cgtcaagtac atcaaaacgt ggcaaaaggg cggccgctca 300
agaggatcca g 311

<210> 391
 <211> 202
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-C6

 <400> 391

 atagtgagtc gtattaagcc gaggcacgagc tgccgagcga tgcgcacgca ggctgtgagc 60
 gcctgcccac ggagttcgag cacgcaccca tcgccatgga gatgagaccg tgtccacagg 120
 gtgagacaga tccatcgatg catgatacga gagtcgagat ccacatggac cacaccaact 180
 ccgagatcga ctgcgtgaac cc 202

<210> 392
 <211> 278
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-C7

 <400> 392

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 ttcaccggca cgcaggacaa gtgcgcggcg tgcgacaagt ccgtcgacgt cagcgacctc 120
 ctacggccg atagcgatca tcgatcaaag catatgcttc aagtgcagcc actgcagagg 180
 gatccgctcg atgtgcagct actcttccac ggccagtgtg ctgtgctgca agaccgacat 240
 cgagcagctc ttcaaggaga ccgggagctt caccaggg 278

<210> 393
 <211> 338
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-C8

 <400> 393

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 cacaggaaga actcgtggat ggacgggatg ccaggcacgc agtgtccgat cctgcctaac 120
 accaacttca cgtacaagtg gcagcccaag gaccagatcg gcagcttctt ctacttcccg 180
 tccatcggca tgcagcgggc ggccggcggc tacggggcca tcagcgtggt cagccgcctc 240

ctcatcccg tcccggttcga ccagccccc cgggagaacg accacgtggt gctcatcgga 300
aactggtaca ccaaggagca cgaggcgcca gtgcgcca 338

<210> 394
<211> 314
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C9

<400> 394

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tggtaatgga tgtaggcacg ggactcgctt cgatgacgac ggtacttcac gcgcagaact 120
aggtagccct gctcactg gatcgaaacg tggatgtcca tatgacttct gagagccagc 180
atgtacatc agaggcaaca acatattggg aaaattcacg atgtacatcg tgacgaaact 240
ctcagagcag cattgaccgt atgaacagaa tgctgaacca tcatgggtca tccatgcac 300
attcagagaa gctg 314

<210> 395
<211> 330
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D1

<400> 395

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catgcccgtc ctcaaggac gcacgcccgt cgagtgtac accgacttca tgcgcgcgtt 120
ccgcgaccac ttcgccgact acctcgga caccatcgtg gaaatccaag tcggcatggg 180
ccccgccggc gagctgcgt acctgccta cccggagagc aacggcacct ggaagtcccc 240
aggcatcggc gccttcagtg gcaacgacag gtacatgcgt agccgcctga aagcggcagc 300
ggatgccgcc ggcaagccct gaggggggc 330

<210> 396
<211> 243
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D11

<400> 396

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atctgggtggg gaagttctcg ctgtccgaca cctgcaggac aggggcggcc gaggcgatcc 120
tgcagctgag gtcgatgggg atcaagtcgg tgatgctgac cggggacagc gcggcggcgg 180
ccaagcacgc gcaggagcag ctcgggggcg tcctggacga gctcgactcc gggctcatgc 240
cgg 243

<210> 397

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D2

<400> 397

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ccatgagggga gtgcatttcg atccacatcg gccaggccgg tatccaggtc ggaaacgcgt 180
gctgggagct gtactgcctt gagcatggca ttcaggctga cggtcagatg cccggtgaca 240
agaccattgg gggagggtgat gatgctttca acaccttctt cagtgagact ggtgctggga 300
agcacgtgcc ccgtgctgtt tttgttgacc ttgaacccac tgtcatcgat gaggtgagga 360
ctggcaccta ccgccagctc ttccacctg agcagctcat cagtgggaag gaggatgcag 420
ccaacaact 429

<210> 398

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D3

<400> 398

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tccaggagag cacgtctata tccgacgggt acctccggtt atttaggagc acgtctctga 120

tcccatcaga tcgatcgcg aagttcaact gaacatgcac acaagcacca gacagaaagg 180
aaacaatgac gtaacggaag gcgacggctg tgcctcgaca aacaacctcg accagatcga 240
aggagaacag tgcgtgtacc ctaccgtgca acagccacac acacgacacg ttacgttacg 300
tacgtacttg ttccttatat aacatttgca tgcgatgcatg cagatgcatc tactacggct 360
acttacacgg gcactgtgcg gttgtttag tt 392

<210> 399
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D4

<400> 399

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cccggtcaca tcgcatgaa ttgccctaac aagaataaga atggcacaga tggagatgat 180
aagaagaaga ataaattcta caacaggaag aaagatggca gagcctacct agttgaatgg 240
gatttggata atagctcgga tgatgatgat gatgacacct catccaaact taatgccgga 300
atggccatca atgaagcccc ttcacttttc tcatccctc attgtctcat ggcaaaggga 360
gatgctaaga atgttacgtg aggccgatga ctacatggac aaagaaaaag aaaagtcat 420
gaccttgaag gaattgtata aaaacc 446

<210> 400
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D5

<400> 400

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gacgcgcttg gtatgacatc cacgagagca cgtgtatacc tcagggtgac ctccggtgag 120
ttaggaccac gtcgctgatc acatcatatc gatcgcgcac gttcacctga acatgcacac 180
agacgccaca cgcagaggaa acaatgacgt aacggaaggc gacggctgtg cctcgatcga 240

catcctcgac cagatctaag gagaacagtg cgtgtaccct accgtgcaag aggcacacac 300
acgacacggt acgttacgta cgtacttggc ccttagataa catttgcatg catgcatgca 360
catgcatcta ctacggcgac ttacacgggc actgtgcggc tgttgt 406

<210> 401

<211> 151

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D6

<400> 401

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ttcaataata gaatctgttt tgagtctcgg caaccggtc aaatagccct ggagggacct 120
aatttcaata cacaggggac agaccggtat c 151

<210> 402

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D7

<400> 402

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ctccctcctc tctctccaac acccatcca tcagcgtgc cctccgcatt gctcttgatc 120
ccatccagta catcgattct cccccaaga tcaaaggccg gaggaggaag aaagtttata 180
atattggacc tagccggttc ccagcccca cccctgtcat ctccactggc agagctcagc 240
caattgcagt accggccatt catctggaag agctgaagga aattacaaaa aacttcagca 300
gtgatgccct cattggcgag ggctcgtatg ccagagtcta ttttggtgtg ctgaaagatg 360
ggacgaaatc tgcagtgaag aagcttgact ccagcaaaca gcctgatcaa gaattccttg 420
tgc 423

<210> 403

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D8

<400> 403

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ttgctcttga tcccatccag tacatcgatt cgccccccag gatcaaaggc cggaagaaga 180
atcaagttta taattttgga tctagccggt tcctacctga atgcgatgtc atctccaatc 240
gcagaacatc atcaagttga gttctcagcc aatcatccgg aagggtgtag cgacattaca 300
gcccccttca ttagtgatgc cctcaatggc gacggctcat atgccagagt ctattttggt 360
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<210> 404

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D9

<400> 404

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taggcctgtc agggagattg cgcattgatt caagacggat ctgcgcttcc atagccatgc 120
cgtgcttgct ctgcaggatg caccagtggc ctagctgggt ggtctcttcc aaaataccaa 180
tctgtgcgag atccatgcca agcgcgtgac catgatgcca atggacgttc agctg 235

<210> 405

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E11

<400> 405

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ccaacaatta agcctccccg accgccacat ctattaggtg cagccatggg tgctgtgca 120
acgaagccta agacgcttga ggggaaagcc ccagctgagg ccaccatctc cacacccaag 180
gttgacactg agaccactac catccacatt gaggttgctg caaacatgc agtagttgag 240

aaggtggagg aggacaagga ggaggcacta acagtggcgg cgaaacaaga gccagcagcc 300
accattgagc ctcagcagat tgctagttag gtgaccactt cggaagtggc ggtcgtcgtt 360
gtcgagcctg agaacaaga ggaggaggaa gttgtggaga agaccgtcat cgag 414

<210> 406

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G12

<400> 406

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agggagcacc cgcgtccttg cttatgagta tgcaactagg ggatcattgc atgatatcct 120
ccatggtaaa aagggtgtca aaggagccca gccagggccca gtcctgtcat ggatgcagcg 180
agctaggatt gccgtatgtg ctgctcgggg tctcgagttc ctccacgaga aggccgatcc 240
tcgagtggtc caccgcgaca tcaagtcaag caacatactg ctctttgacc atgatgttgc 300
gaagatcggg gacttcgaca tctcaaacca ggcccctgac 340

<210> 407

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G2

<400> 407

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tcgccgccgt gcccgccacc gcccgggcga cgccgaccga cgccgccatc gacgaggcgt 120
acgcgcattc cgtcaacctc accgctaacc aggagtactg ggcgagagcg gcggaggcgg 180
cgcacgcgta caaccgcgcg gcgtaccaga ccgaccccggt ggccgtcgtg cagcgcttca 240
acgacggcgt gcacagggcg acggcgacgc ggtcgcggtc cctggcgcac agggcgcggg 300
gcccctgcac ggcgaccaac cccatcgacc agtgctggcg gtgccgccgc gactgggccc 360
gcgaccgcaa gcgcctggcc aggtgcgcca tgggcttcgg ccacaggacc accggcgggc 420
tgggcg 426

<210> 408
 <211> 437
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G5

<400> 408

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 gcgggccgggc tcgggctcgt cctcgtcggc cgcaaccggg agaagctggc cgccgtggcc 180
 gccgagatca gggccaagca cccaagggtc cccgaggtgc gcaccttcgt gctcgaacttc 240
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 gtcggcgtgc tcgtcaacaa cgccgggctg tcctaccgt acgcgcgcta cttccacgag 360
 gtggacgagg agctgatgcg cagcctcatc cgggtcaacg tcgagggcgt cacgcgggtc 420
 acgcacgccg tgctgcc 437

<210> 409
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G6

<400> 409

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 cgggaaatgg ggagaaaagg caagtgggtc gacaccgtgc agaggatcct gatcacctct 120
 gaacctgatc ccgtggagac gcagaacgat gatgccgcca aggactggaa gctcgatcat 180
 cacgagaagg ctgcgaagct gagagacaat aagtcggcca tcaggaggat atggcagttc 240
 ggcaaataaa actcgtccgg tgcttccgcc tccgcgacgg cgccggagga cgcgaggtt 300
 cttcagtttc cgaagtcgcc aaggtcggac aacgagtacc atgtcgtcca ggacctcacc 360
 gaggaggtgc cgttcatgga gacgagaggc gaggaagaag aagaagaaga cggcgagcgc 420
 atgaaccctg gggatg 436

<210> 410
<211> 82
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G7

<400> 410

ttactacacc ctaaagtgag tcgtattaat gcgtcgatgg gcggccgttg gtgtcgggga 60
gactccagag tgtgtgagga ca 82

<210> 411
<211> 458
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G8

<400> 411

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aaagacgcac ggcacgggtc tccccttcaa cagggtactca tggctgacga cgcacaactc 120
gtttgcggtg gtgggcacca agtcgccgct ggggtccgcc atcatctctc cgcccaacca 180
ggaggactcg gtgaccgacc aactgaagaa cgggtgtgagg ggcctgatgc tggatgccta 240
tgacttcaac gacgccgtgt ggttctgcca ctcttccac ggccgttgcc tgaccttcac 300
cgcctacgtg ccggcgctga gcgtgcttac ggaggtccgg gtgttcctgg acgccaaccc 360
gtccgaggtg gtcaccatct tcctcgagga ctatgcagcg ccggggtcac tcagcaaacac 420
tttcaacgcc gccggactgt ccaagtactg gttccccg 458

<210> 412
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-G9

<400> 412

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tctattagcg acagggccgc agggggccgt cagcgccgag gggatggtgt catttgacaa 180

tttgatcagc tgcaaggtac tgggcaactg cgataagaac ctgggccccg aggcctcccg 240
cccagggaaa cccgccaacg actacacccg cggctgcaac ccgatcaccg gctgtcgcg 300
ctgatcatat ctctctggtc gatgtgcgcg caatgtcaat gtcgcacgcg cgtgcaggta 360
ccaggcctta gcgtgtggtg cggcgtgtgt gtatatatta cacacatgca ttatacattg 420
gtcgtccatc gttac 435

<210> 413
<211> 426
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-061-Q1-E1-H1

<400> 413
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ggacatgata gacaacatcg acggccgctg ggtaaccaag aacaaggcgc gcatccaagt 120
tggcgactcc tcttcgtcgg acgaaagcga cagggagaag gaggaagatg aagaagaagc 180
acatgaggaa gtggccaagg cgcctccgct gggttggaat catcacaatc accacgaagc 240
ggccggcggc attggcagca acagcaacag gaggcggctt ctgtcgaagc agctgtccat 300
gaagaagacc accagggaga tcaaattgga gaagcgccg cggcagataa tgccggcgag 360
cagcctggtg gtgtcgttaa acgacgacgg aggaaganga ngctgcggca gcatgaagag 420
cgccgc 426

<210> 414
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H11

<400> 414
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gcaaccgcca catcagccat gggcgctgc gcaaccaagc ccaagacgct tgaggggcag 120
gccccagctg aggcgcgctg ctccacaccc aaggttgctg ccgaggccac tccaatctcc 180

gttgaggttg cggctgatga acaggtagct gagaaggtgg tggaggagga gccggctgcg 240
 gcggccgacg ttgagcatca gaaggctaata gaggtgctcg ctccagagga gccgctcgcc 300
 gagcccgacc acaaggagga ggaagccgtg gagaagaccg tcgtcgagga ggagaagcca 360
 gcggcagcag cccatgcaga ggaaaaggtc gccaccgccg ccgagaccac gacgacggtg 420
 gaggcgaaga aga 433

<210> 415
 <211> 385
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H12

<400> 415

ccgggtcgac ccacgcgtcc gggccacccc aacgtcgtcg gactcgaggg cctcgtcacc 60
 tcccgctcct cccctccat ctacctcgtc ttcgagtacc tcgagcatga cctcgccgga 120
 ctcagctcct ccccgacat caccttcacc gagtcgcagg tcacattggt ggagatgctc 180
 ttagctttag cttgtctgcc tcgcgcgggc aaacatgtca gaaactgcgg tacgcatcag 240
 tcggacaccg cgatcgcggg ggccatgcat gctgtcagct cttgaccctt gtcaccatcc 300
 aatccaatgg cgatcggtcg atcgtcttgt cacgattcac aaccgttgcc tgatgacgcg 360
 cgcgcgataa catgccgtgc gtgcg 385

<210> 416
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H2

<400> 416

gtcgacgcac gcgtctggac tctgtcggag caggagacgt gccgcgccgc ggacttctcg 60
 cgcatgcct ggtcaggacg gtgggcgcgg ctcgccaaca acgacagctg cgaggacgtc 120
 aacgcatcgg ggccgtaccg gtgcctgtag ccggaccacg cgtgcgatgc accgtggtgc 180
 gacgggccgc tcggcacgct ggcgagcaac ggggtgggtgt agtcagcgca gtgtctcttc 240
 aagctcttta cggccgatgc gtcttgccgg tgccttgacg ggaagtggct cttcttctgg 300

ggcgactcta accacgtcga ctgcatccgg aaactcctca ccttcgtcct cggcatcacg 360
gacacgtctg ctgtgacacg ccggtttgat gcagtg 396

<210> 417
<211> 450
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H3

<400> 417

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aaaaaaacac actgaaccca ataatccgat cccacagaaa cttttctctc ggtccgttcg 120
atcgatcgct gccgtgtcgt ttgccagaca ccatcagcac ccaaaaccat ggccctgcaac 180
ctggctcagt gcgccaccgc cgccgcggcg accgtcgcgc cccgcacccc tcgccctgct 240
gcgtccgcgt ccgtctcctt ctccgcgagg aagccggcgg gcggcagcct gcggctgcag 300
cggcaggcgt gctgcgagcc gtcgggtggcg ccgtcgcggg cgggtgttcgc ctgccggggc 360
gcggcgctcg ggagcgcggc cgacctggcc tccgggggca agaggtcgtc cggcggtgccg 420
gtgttctca tgatgccgct ggacaccgtc 450

<210> 418
<211> 369
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H5

<400> 418

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ggccatggcc tgccacaccg acctcgtcaa cctcaacctc tcggacaaca ccgagaagat 120
catcgcgga tacatatgga tcggtggatc tggcatggat ctcaggagca aagcaaggac 180
cctctccggc ccggtgaccg atcccagcaa gctgcccagg tggaactacg acggctccag 240
cacgggccag gccccggcg aggacagcga ggtcatcctg taccgcagg ccattctcaa 300
ggaccattc aggaggggca acaacatcct tgtgatgtgc gattggtaca cccagccgg 360
cgagccaat 369

<210> 419
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H7

<400> 419

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tttaccggcg acgagcacac accagggcac tggagggcta ccatctgctt cgctttctga 120
aaaaaaaaca gtttcggcat aattatcacc ctaagatgcc tggaattaca atggatggat 180
ttgttgacga ggagggtccg aacaggggtga attcctctcc acagaatgaa aatctgcccc 240
ccccaatttc gacggcagct tcaacaatgg cgccaagcat gcaaagtga gcaacttgaga 300
tgcattgtcga gagctccggt actggggagc cctcaattga gcagctctac aacaatgtgt 360
gcgagatgaa gagctcaagt gaggggtggct ccctgtcaca tgagagcttt ggctc 415
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<210> 420
 <211> 408
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H9

<400> 420

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ctgaggccgc cgtctccaca cccaagggtg cgcccgaggc cactccaatc tccgttgagg 180
ttgcggctga tgaacaggta gctgagaagg tgggtggtgga ggagccggct gcggcggccg 240
acgttgagca tcagaaggct aatgaggtgc tcgctccaga ggcgcccgtc gccgagcccc 300
accacaagga ggaggaagcc gtggagaaga ccgtcgtcga ggaggagaag ccagcggcag 360
cagcccatgc agaggaagag gtcgccaccg ccgccgagac cagcagca 408
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<210> 421
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A10

<400> 421

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gctcaccgca cctcgctctc tcaccgcgtt tcttccgtta atccggtaga aaatggccga 120
tgccgaggat atccagcccc tegtctgcga caacggaact ggcatgggtca aggctggggt 180
cgctggcgac gacgccccga gggccgtctt cccagcatc gtggggcgcc cgcgccacac 240
tgggtgtcatg gtcgggatgg ggcagaagga cgcctacgtc ggtgacgagg cgcagtccaa 300
gaggggtatc ctgaccctca agtaccctat cgagcacggg atcgtcagca actgggacga 360
catggagaag atctggcatc acaccttcta caacgagctc cgcgtggctc ccgaggagca 420
cccg 424

<210> 422

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A11

<400> 422

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agaccaccaa cgaccaacac tcctagctgt ctcggttagg gatccatcgt gctgtgtgtt 120
cttctggctg ttgtacctga tgctcagagt agacgctggc tgctgctccg caaggaaact 180
gactcccccg accgcggttc atgctcctgg ctggtctggc cgctggccgc ctcgacggga 240
acgctgccgt agaatgacga ctggggctgg tgttgttgtt acagtatggt ccttttttct 300
ttcttctttc ccttttcata cattaagctc tgtgatgtag ctgcccgtgg tgttgattca 360
tgaaatcatg ctagagattt tttcctggca gtaagtgcgt gcctgtaaaa ctgtcgaact 420
atttgacga aagttgtaca ctg 443

<210> 423

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A12

<400> 423

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cccctccaag cccatgtccg tgtacgccac cgtgtgggac gcctccacct gggccaccgc 180

cggggggccg taccgcgtca actaccgcta cgggcccttc gtgcctcctt tcaccgacct 240

ggcctcctc ggctgcccg ttgacgggcc catccagcag acgacggcgg agcgggtgcg 300

cgcagccgcc gaggcactca gggcgtcgga cgtggccgtc atgacgggtg agaagcagca 360

agccatgcgc aggttccggg agcgaacat ggtctactcc tactgctacg acacgtgcg 420

ctaccccgcc gcgttcc 437

<210> 424

<211> 183

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A7

<400> 424

ccacgcgtgc gcggacgcgt gggatgacca ccctgcctgc aaccttttgt acaaatagta 60

ctaattgtag ttagattact gtgatacagt caaaaggaaa tttgtatgat gatcaggttg 120

catgtaacca gaatcatcaa tcagcctgta aaaagagaat atgtgaaaat tgtattaagc 180

tga 183

<210> 425

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A9

<400> 425

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ggccacgagg gtgacgcatg tgcgcaaaga acgggtttcc ccgagttcaa gaggtaggag 120

atggcgaaca tcatgaacga cttcgacgac ccacaggacc tcgcaccaac aggcctgttc 180

ctcgggctga cgaagtacat ggtcatccaa ggagaacctg gtgctgtcat ccatggcaac 240

aagggatcag gaggcacac cgtgaacaat ataggatcatg cactcgtggg tggcatcgac 300
gatcagccga tgacgcctgc gcaatgcaac atgggtgcttg caacgctagg cgactatgtg 360
cttgaacaag gcatgtgact actacgtagc agct 394

<210> 426
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B10

<400> 426

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gggtggcatg cagatttttg tgaagacatt gactggcaag actatcacct tggaggtgga 180
gagctctgac accattgaca atgtgaaggc caagatccag gacaaggagg gcattccccc 240
agaccagcag cgtctgatct ttgcgggcaa gcagctggag gatggccgca ctctcgcgga 300
ctacaacatc cagaaggaga gcacccttca ccttgttctc cgctcaggg gtggtatgca 360
gatctttgtg aagaccctga ctggaaaaac cataac 396

<210> 427
<211> 424
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B11

<400> 427

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cacgacaacc acggcaagtt cacggccggg ccgtggaaac ctgcccacgc gaccttctac 180
ggcgggcccc acgggtccgg caccacggcg ggcgcgtgcg ggtacaagga cacgcgcgag 240
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tgcggcgggt gctacgaggt gcggtgcgtg gacagcccca gcgggtgcaa gcccacgcg 360
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ccgc

424

<210> 428
<211> 442
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B12

<400> 428

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gcccgtggcc accgcgtacg gctgctacga cgactgctac gagcgctgcg ccaacggcaa 180
gaaagacccc gcctgcacca agatgtgcaa ccaggcggtgc ggctccacgg atcagggcgc 240
cggtgccgcc ggcgcgcgc cggttgatc gccagcgca ttcacgctt cagctcgata 300
taatcgctgc tccgtcagca acccacatat gattcgatca attttctctc tctaatttct 360
cgaccccgtc gaattttttt cttttctatt cttctactat actactacta tctgtttgtc 420
gcgttgaatt cttctcatac at 442

<210> 429
<211> 366
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B9

<400> 429

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caatacttta agccgaccta tgctagctat actagattgg gttggatccc aagcaatgca 180
ttacacatgc atgcattgga ccgtgatatc tatttgctac cactacccta ttacgacagt 240
gatgctggcg ccaacaatga tggtgtcatc ctcttctctc atcttcttca tctccatata 300
tagctagagt gagacttcgc tggtgtttta aagagaagag ttaagaaatg gattgacacg 360
ttatat 366

<210> 430

<211> 428
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-063-Q1-E1-C10

 <400> 430

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 aacctggtgg agatgtaccg caagatcagc agagccgacg tcaagtaccc gcagtgggtc 180
 tcccctgagc tccggcggtt gatgcccaag ctctcgaac cgaacccaaa caacaggatc 240
 acgatcgaga agctggtcga gcacccttg ttcaagaagg ggtacaggcc ggccgtcatg 300
 ctgggacagc cgcacggctc cagcagctc aaggatgtca aggtcgcctt cagcaacgcc 360
 gaccacaagg acagcagcac caaggtggaa cagccggcgg acagctcctt gaagccgggg 420
 agcctgaa 428

<210> 431
 <211> 345
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C11

 <400> 431

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 tgcaccgcag gtgacatgtc gaccatgggtg tcaggtatct tgatctcaat gtccatcctc 120
 tttagaata gtgaacaggt aatgaatgg gcgttaccta gattagacga ttacaggac 180
 atacaccttg ctcgagctgc cgtactagga attcagcacg gtgcaatcgg ccatcgaaac 240
 agtggccgac ggtaaactgc aatgggtaag cgtccagtac cgtctagta tgcacagggg 300
 ctgtgttgtg aaaccggaga gtagacgctt catcttcgag agggg 345

<210> 432
 <211> 420
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C12

<400> 432

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ctcctgggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg catcgatgcg 120
aaagcggtccg ggcttgggtg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240
aagcagacaa tctcatacc caagggtgac ttccttgctg gacaactcaa cttcacaggc 300
ccttgcaagg ggcacgtgac catccagggt gatggcaatc tgctggcgac cacggaccta 360
agccagtaca aggaccatgg taattggatc gagattctac gtgtggataa cctggtcac 420

<210> 433

<211> 208

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C3

<400> 433

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gatcgctatt gacgagccga tggcacatgt gactatgcag gacggcctc agtagcagga 120
gacgcaacgg atcttcttca cagatttcct accagggtctc acgcccacgc acaaactgct 180
gtacagcgac tgacacgacc ttgggtac 208

<210> 434

<211> 564

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C7

<400> 434

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tccgcggttt gcccgtcgat cagttgttgg ctgccggccg ggtactaccg cctgcacgag 120
cagcggctag ccacagccca cagacagacg acgtcaggtc ttggcagggtg tgcaagcaga 180
cagagctcgc tcggtcgcca tgtctttcac cggcacgcag gacaagtga aagcctgcga 240
caagacggtc cacttcatcg acctgctcac cgccgacggc atctcgtacc acaagacctg 300

cttcaaatgc agccactgca agggcgctct ctcgattagc agctactctt ccatggacgg 360
 cgttctgtac tgcaagacgc acttcgaaca gctcttcaag gagacagga acttctccaa 420
 gaaattccaa ggtggaggtg gagcatcttc aaacaagaac gacccggcaa aggctccgag 480
 caagctgtca tctgcattct ctggaactca agacaaatgc gcagcctgcc agaagaccgt 540
 gtatccattg gagaagatga cgt 564

<210> 435
 <211> 441
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C9

<400> 435

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 acgacgtgat cgaggcggca cgcaccaagc tgatgcagaa gcgccagtgc agcagggtea 120
 aggcgctcgt cggcgcttcc gagactgtca tagacacca gaaggacgcc gccgccggca 180
 ggccacaaca catctaccgc aagtcagctt aaaacatact gggggggcgg ggacgcacgc 240
 atctccacg ctctgtgtct tcgccttaat taattaatta attgttatga tcatgtcggc 300
 cagcccaacg ccgtatgcat gcatgcacac ggcgctaatt aatccctgtt tatttactac 360
 tccgtgaaat gtagtttctc cgtatacagc gagcagtagt attctgtaaa gaggaaaatg 420
 gtggaaccgc atgttgcatt c 441

<210> 436
 <211> 380
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D10

<400> 436

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 tgagggtatg gaggagggcg agttctccga ggctcgtgag gatctggctg cgctcgagaa 120
 ggactacgag gaggtcgggtg ctgagtttga cgagggtgag gacggcgacg agggtgacga 180
 gtactagacg ctctactggc gcggcttctt cggccttgtg tgccactgct accctgtgat 240

ctgccctgat tggctccaat cgtgtaatgt tccggtcggt tcttatcaac ctgtcgttgt 300
 gtgggtaaca ccttacgttg taagacttta ttcccccgct ttgcaactgg gtaattaatt 360
 ttggcgtaat ggttttcttg 380

<210> 437
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D11

<400> 437

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 acgtctctctc tctcttctctc cgtcgcgtcg ggctcggcgtc gccatcgccg gccatgggtt 120
 gcggtggctc caaggaggcc gtggccaccg gcaacaccag cgccggcagc aaggctcctcc 180
 ggaggaagcc ctctctcgctc tccaccggcg caagccacac atccaccacg tcgccgtcgt 240
 cctccggcgt cgctcgtcaag gacgtcgtga aggatgcggc ggccggccggc gaggtgatga 300
 cgcccgccga cgccgagaag cctatctctg tcgaccccaa ggcagacgcc atcgtgggtga 360
 tggacgcaa gaaagaggag ggcaacaaca aggtggccgt ggaggaggat ctgcttctctg 420
 aatcc 425

<210> 438
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D12

<400> 438

ggtcgacca cgcgctccgac aagtttcaac atgtcaaact ttgctaacag ggaggatctg 60
 cttggtcaga gtaaaaaggc agatgacatg agcagagttg ctgggttaga taaccaaggg 120
 attgttgctc ttccagaggca aattatgaaa gagcaagatg agggctcttg gaaactggaa 180
 gagacagtgc tgagcacaaa gcatattgca ttagcagtca atgaagaact taccctgcac 240
 acaagattga tagatgacct tgaagatcat gttgatgtta caaattcacg tcttcagcgc 300
 gtgcaaaaga ggcttgcaat tctgagcaag cgcaccaaag gtggctgctc atgtatgtgc 360

ctgcttctat ctgttgctgc catcgtgatt cttgcagtc 399

<210> 439
<211> 261
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-D2

<400> 439

gacaccagat acgattcgca agaccttcaa catcaagaat gacttcaccc ctgaggagga 60
agangagatc cgcacggaga aacagtgggc cttcgagtaa ggaagtgctg gatctattga 120
tgcctaagtt tcgtggtgtc tactactatg tctactttat gttgtcctaa tggttgtaag 180
tatttttggga gtcactttgc ttgcgaatgt ctgcgtaag acttatgtgg tcaatggtcg 240
gttattaact tattaccatg a 261

<210> 440
<211> 412
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D9

<400> 440

ccacgcgtcc gaccacccct cagcgcgacg aaggtaagat gttcctgcgg aggatcctga 60
ccggcggggg cggcctggcg gccctgaggg cggcgcgcgc cgtgaaggag acgacgggga 120
tcgtgggcct tgaggtggtg cctaacgcgc gagaggttct ggtagggctc tacgagcgca 180
cgctcaaaga gatcaaggcc gtccccgaag acgagggtta ccgcaaggcc gttgaatcct 240
tcaccggtca ccgcctccag atctgccagg aggaggagga ctggaagcgc atcgaggacc 300
gaatcggatg cgggcaggtc gaggagctca tcgaggaggc cgaggacgag ctcaagctca 360
tcgctaaaat gattgaatgg gatccatggg gtgttcccca tgactacgaa tg 412

<210> 441
<211> 382
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-E10

<400> 441

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ggagaggtcg tgggtgtcaac ggaaaacctg gcaaggggga tgacgaacga cttaatcctc 120
cccgtgcagt acttgcgtctt ggatgccatc ttggacgtgt tctgcagtac ggcgatcggc 180
aagcatgacc acttctcaaa tcccgggtggc ccaggctgca tgcacctcct tctcggacag 240
acacttacct gcatgacagg gtacctcttg ccatcaccgg agttcttgat gaccttgaag 300
ctctgaccgt aatatatccg gaatatggtg gcgtcctcca ccctggacac gggccggggc 360
atcacaggcc cgggcccggc ct 382

<210> 442

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-E11

<400> 442

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cgcgggccgtc ctctccgcc gcctgccgac cccgaccca acagcggcga cgcccgtcac 120
cgcgacggcg cccccgcgc ggcccggcac cgcgtccaac ccgctcggcg ccttgctcgt 180
ccccttctgg cgcggggtgc ggcgagcgcc gaaacagccg gtccaccccg cctccgccgc 240
cgcgggcgcg agggcgggcg agcagcagga ggcggaggcc gaggcggagg cgcggcagct 300
ggtgggggtgc gcggtgccgc tgttcgggcc gtacgtggca cagctgccgt ggcacggcg 360
cgcccgggcy tggtgtgca agctgttccc 390

<210> 443

<211> 483

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-E12

<400> 443

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taaaatTTTg aactgaatat ccacattttt tgtataggaa aagaaccatt acatcactag 120
gtcaccgtag cagaaggtaa taatagtaca taatacaaac atgataacat ggaatgcaaa 180
aggtacagga tttctacaac taagccatct gtttctaaca tgagtagaag aaatgacagg 240
acaggtaaac aaacctctgc agagactgca actgcatcaa accagtggtc acatttcaag 300
gcctgcagaa gtggccgtag acgggtatca aaattggaga ccactgcagt tttaacacca 360
gctttcctca nagctttgaa tacattttca gcatcagggt cacaaagctt cgaggcctan 420
cangcataat aatcttctcg ttagtcgagt tgaagtcaga gacaacgaaa gaatgttgtt 480
ttg 483

<210> 444
<211> 409
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-063-Q1-E1-E9
<400> 444

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atgcctgtat gaactcaaga tttatggtag atcctggaac tgtgggatgc caaacctggg 120
ctaactacca cattatgaac tctctgctga tctaacagca tttctacaaa aattcttttg 180
ccggaagggt cattattcat gtgtaacaat gaacgaacat ctactgctta agattgggtga 240
cctacgcatt cttgacccga actaggtcat tgggacagtc atgaagtact caactgggga 300
aaccattgca catccaatct ccatggcgca atccatttta acagtgggac aaaggatggc 360
ttctgatgcy gcacctcatc tgcaacttgt ggagtgtcac atttgtcag 409

<210> 445
<211> 342
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-063-Q1-E1-F10
<400> 445

ggtcgaccca cgcgaccgag cgcttcaacg acggcgtgca cagggcgacg gcgacgcggt 60
cgcggtccct ggcgcacagg ggcgggggcc cctgcacggc gaccaacccc atcgaccagt 120

gctggcggtg ccgccgcgac tgggcccgcg accgcaagcg cctggccagg tgcgccatgg 180
gcttcggcca caagaccacc ggcgggctgg cccggaagtt ccacgttggg gatggcccca 240
accaagaagc cggcgaactc ctcaaccca agaagggcaa gctccgggaa gccgttaccc 300
cggccccggc cctgtggatt aacttcgcgc gcgaaatggg ga 342

<210> 446
<211> 456
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-F9

<400> 446

ccacgcgtcc gacctccatc tccagcatat gtgagtgaac cgctccaac ggtgaaatct 60
ccttcaccac catcacctcc accgatgatt aaatcacgcg caccaccggt gccggtgagg 120
tcacctccat cgtcagtga atcaccacct ccttcaccac tgttaagtcc gccgccgcca 180
ccagcgccgg tgaggtcacc tccaccgcta acgaaatcat cacctcctcc accaccgata 240
aggtcgccac cccaccaca agcaaactca cctcctccat cagctctaata agctcacct 300
cctcctccga tgcaatcccc tccaccgcct gctccagtca gtcaccacc accacctata 360
agatcaccac caccggctcc agtatgtca ccacctctc tggcgcaatc cctccatca 420
cctgctccag tcagctcact accacacctg taaaat 456

<210> 447
<211> 299
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G10

<400> 447

accacgcat ccgacaatac atcaaaagaa ataaaaaaca ataaaacaaa aaaaaaaaaa 60
aaaaaaaaa ataaaaaaga acaaagcaaa aaaaaaaatc cagaggcaag attctctagg 120
aaggtcagcg acaaaggggc gtgccctcta aagtttgagg gtttcaattc cctggcctcc 180
aacttcttcc gtctcctacg gtgtcccca agtccattcc aagggcctcc cttttaaac 240
ttttggatgg gtaaaccttg gcctttcccc actttaaccc ctttgccgta cccctctt 299

<210> 448
 <211> 420
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G11

<400> 448

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gtaccgtatc cagaattcgc gggtcgaccc acgcgaccga ggcgatcgat ctggagattc 60
cggggccctc ctgcaaacgg tgccggtcgg gtagcagggg gtgtttctcat cacggtaagc 120
gccgccggca gaatcggcgg tccgaatctc caggaaccgg cgattccacc tcaacgactc 180
ccacatctgt gcgaagatgg cgtacactcc tttggatacc ctcaaattggg ttgtaaagga 240
aatggagatg aactcggtcg aggttaggca gacggttggt catcctacca actcatctta 300
tgaactccag cagcttattg acaagatcct agacttatcg gattggttgg acatggttgc 360
cattcaatgt gcataagtta ttaccaatta caaccacccc cctcacccac tacagaagag 420
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<210> 449
 <211> 408
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G12

<400> 449

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gtcgacccac gcatccacgc cctcgttgcg gtcgtccaca tccttttctc tcctcctcgc 60
cggcccaacc tgaatggtcc tccaccaaga aggaaaaagg gagggaggga acggaagcat 120
caaccatgtc caactccgcg tccggaatgg ccgtccgtga tgaatgcaag ctcaagttcc 180
aagagctcaa ggcaaagagg agcttccgcc tcatcgtggt caagatcaac gagaacgtgc 240
agcaagttgt ggtggacaag ctgggggggc caagaaaaaa ctacgacgcc ttcacggcct 300
gcttccccgc caacgagtgc cgctacgccg tgtccgattt tgacttcgtc actgacgaga 360
actgccagaa gagcaagatc ttcttttatct cttgggcccc ggatacat 408
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<210> 450
 <211> 357
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-H10

<400> 450

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gaaggagaaa tggcttccgc acacaacgct ctccgggtgt ttttcatoct agccgtggta 120
tgtgccgtat gcacagcgaa aaggacagga gccacaagg aagaatcggc ggcagcccc 180
ggcggcgctg ctggaggcag cggcgggacg ttcgacatct ccaagctcgg cgcgaccagc 240
gacggcaaga cggactgcac aaaggcagtc caggacgcgt ggacgtcagc gtgcgaagcg 300
accggaagcg ccacgggtggg gattcccaag ggcgactnac tgntcggccc tctcaac 357

<210> 451
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H11

<400> 451

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tgaaatctcc ttcaccacca tcacctccac cgatgattaa atcaccgcca ccaccggtgc 120
cggtgaggtc acctccatcg tcagtgaat caccgcctcc ttcaccaactg ttaagttcgc 180
cgccgccacc agcgcctcgt aggtcacctc caccgctaac gaaattatca cctcctccac 240
caccgataag gtcgccaccc ccaccacaag caaactcacc tcttccatca gctccaataa 300
gtcacctcc tcttccgatg caatccctc caccgcctgc tccagtcagc tcaccaccac 360
cacctataaa atcaccaaca ccggctccag taagctcaac a 401

<210> 452
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H12

<400> 452

ggtcgaccca cgcattccgat tcaagcacct cctcttcccc cgccgggcaa caactcagcc 60
gccgcaaccg ccacatcagc catgggcgcc tgcgcaacca agcccaagac gcttgagggg 120

caggccccag ctgaggccgc cgtctccaca cccaaggttg cgcccagaggc cactccaatc 180
tccgttgagg ttgcggtga tgaacaggta gctgagaagg tgggtggtgga ggagccggct 240
gcggcgccgc acgttgagca tcagaaggct aatgaggtgc tcgctccaga ggcggccgtc 300
gccgagcccg accacaagga ggaggaagcc gtggagaaga ccgtcgtcga ggaggagaag 360
ccagcggcag cagcccatgc agaggaaaag gtcgccaccg ccgccgagac caccacga 418

<210> 453

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H9

<400> 453

attcgcgggt cgaccacgc gtccaagaag ttcccaggca tcggcgccctt ccagtgaac 60
gacaggtaca tgcgtagccg cctgcaggcg gcagcggagg cggccggcaa gcctgattgg 120
ggccacggtg ggccgaccga ctctggcggc tacaacaact ggccggagga caccgtcttc 180
ttcgcggcgc acaacggtgg gtggagcacc gtgtacggcg acttcttctt gtcgtggtac 240
tcgcagatgc tgctggagca cggcgacctc atcctgtcgg gcgccacgtc cgtgttcggc 300
gccgcgccc tggaggtctc cgtgaagggt gccggcatcc actggcacta cggcagccgg 360
tcgcacgccc cggagctcac cgcgggctac tacaacacgc ggtgccacga cgggtatctc 420
aacatcccg gcctcc 436

<210> 454

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A10

<400> 454

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aagtcaaca agaagaaaga gaaaactcgg aagaagcaaa gttgtaagtc tagcggtgaa 120
aagaacaaga ataagacaag ttcggaagga aaatatgttg aacaaccaga ctcttgctac 180
gaaagcaaag atgaagacag ttggagtggg aacagtagta gttcattatc gaagagacca 240

actcagcatg cttttggcgc aacgagtcga ttttcaaagg atacagtaca ctttgttcaa 300
gatgaatcta gtcgttactc caatggacct atcatggata aagatttaga agagtgggaa 360
gcagatattg aggcggaagt ggaagctttc cgtaagagac tgcaggaact tagtgcgcca 420
ttgaagaata agccaaaggt cgggtgccttt ccgcatcg 458

<210> 455

<211> 454

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A11

<400> 455

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ggttgctcaa ggtgtgaaat ggcagtagtt gaagataaca gagtctttgt tgggtgggtcat 120
ccttggtcag ttagtgaaga agaccttcgt gaaacttttt ccaaatatgg agaagttggt 180
gatgcaaggg tgaatatccg tgttcctttt gttttgggtt aaacttggat cccttgacta 240
cctgcaccta ttctcgggtt cccttttatt tgccccatag ttagtgtcac taactagtcg 300
catgttactt tgagagggta gagagctttt cgagttactt tataactgtt cacacttggg 360
aaccctcgaa aatagtgtga atgatatgca cttgggttga ctagtgtaca ccaaagttgt 420
tgttactata tagtgctcac aactgtgtcg ttgc 454

<210> 456

<211> 203

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-A8

<400> 456

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gcgtcatttg tatggcttta atttttttta ttatatatag ataaggaaat attttcctta 120
aaaatggagt acaagggatt gttgagaact gcttttggtc atgatattaa tatatatgat 180
gaatatttct tgcaatttcc ttt 203

<210> 457
 <211> 506
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B10

<400> 457

gggccggtat tccgggtcga ccacgcgtcc ggtaaacctc ctcttgcatc gcattgcagg 60
 tcgtagttga gcagcagcaa ccactgcaca ggatgtcgtg gcagacgtac gtcgatgagc 120
 acctcatgtg cgagatcgag ggccaccacc tgagctctgc cgccatagtc ggccacgacg 180
 gcgccgtttg ggcccagagc accgcattcc cacagttcaa gccagaggag atgaccaaca 240
 tcattaagga cttcgacgag cctgggtttc tggccccgat cggcctcttc cttggcccca 300
 ccaagtacat ggatcatcaa ggcgagcccg gcgctgtcat ccgcgggaag aagggatctg 360
 gaggcataac tgtgaagaag accggacagg cgctggtgat cggcatctac gacgagccca 420
 tgacccttgg acagtgaac atggtggttg agaggctcgg tgactacctc gtaaagcaag 480
 gcctgtgaat gcatccaaac aacgac 506

<210> 458
 <211> 343
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B3

<400> 458

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 ctgacgttcc gggatgatgac cagcgaccac cgcaaggcca cctcatggca cgttctccct 120
 gctgactgga agttcggcgt cacgtaccag gcgtccaaga acttctaagt agccactttc 180
 cctcctcttc ttcaacctgc atgcccgcaa gcagccatgc agatgataac atgcatcatg 240
 catgcatatt cattctttcg ctcatgcact ccgatacggg gccggagtta aaaaaatata 300
 aatcaatgtg caaattcaaa tgacatctta accagttgtg atc 343

<210> 459
 <211> 293
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B6

<400> 459

cctgacgtac ggtccggatt cggggtcgac cacgcgtccg tctagatcgc gagcggcccc 60

cttttttttt ttttttgaag aagaaaatat gaccgttttc aatttttacac ggtaatgtat 120

caccgaaaca agtatacaac attggccaac tggtaatctt cttaccatgt accaacgtat 180

ctcctctcac ccacacacat ctacacaatg aggggggcaca gccaaacctt gcctctcagg 240

ggccgaagac acctcgtgc aaagaaggaa tccccagggg gaacgcatga cac 293

<210> 460

<211> 498

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B7

<400> 460

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ggtcattgca attctggaca tagccaagtg cctatatgat gctattgcac ggatggaaag 120

ggcggcggag aaaggaaaag caattgccgc tgccgtcgag ggcgttgaaa agcattgggg 180

agcagctgtg cctgggtcta acaattttat tgagacgctt cgagaacgga tgttttaggcc 240

atcgtgtctt actattatct ctgagaatcc aaaagttgtc actggtgcac catcagacat 300

ggtgttgaca gcatcaaaga agatgctgga attaaaagtg agttcagcag ttgtagcaat 360

tgaatacaaa cctggaggaa ttctgacatc tagagatata ttgatgcgtg ttatcgccca 420

aaatcttcct cctgagtgca ccacggtcga gaaggctcatg actcagagtc ctgaatgtgc 480

cacagtggac accccaat 498

<210> 461

<211> 345

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-B8

<400> 461

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 tccaggactt tgactcgtgt gaccgtccct tcacccatgc cggcggtgtc cccaacccca 120
 tgggtaagtt cgataaggag ctccagccaga tggccaacaa ctgcatggcg cttgcaaaca 180
 tgatatgaat catatatatg cggccgggga cagtttggca tgtgcttaca ctctgcgct 240
 agcgtgaggt ggcggcgccg cgcattgcaag ggaatgcttg gacatgagga gcacttggtt 300
 ttcatttaag aaatcanntg aatataatta caattaagtt gaacc 345

<210> 462
 <211> 496
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-B9

<400> 462

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 gcggcgtggg aaatccgggg aagaagccag tggccgagag acaacagacc gcgtgaggca 120
 gcgacagtac gaggcacgcc acctagcctg cagagagggt catctgcaca ccaacagggt 180
 ttgcgacaat gtctagacct tcattctaac agatgcaacc ttaaagagtg ctgagattca 240
 agaaacactg agcaagatgg gtctcgatgc cgtgggtggc gcctgctacg tctttctagt 300
 acttgctctt gtgctcacag ttcgcttctt ctacgtactg tggcacagtg gccaaccaga 360
 gtcaaggttg tgcaccacca gattgcgttg tctcaatgtc cttgggtccg aaaaggtcca 420
 gattaccagc tccgggtgat gctgatgagc tatctgtcat tgaagaccaa attgcatgga 480
 ttgttcacat aattac 496

<210> 463
 <211> 502
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C1

<400> 463

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 ccttttcttg ccacggcaaa acaccttcgc cggcgagagc atggcgatgg cgtaccgtgt 120

cctggagggtc accctgggtgt cggcaaatga cctcaagaaa gtgtcgctct tctcccggac 180
 tcgcatctac gccgtgggtt ccatctccgg attcgacctc cgcatccctt cccacagcac 240
 ccaagcagac cacagcaacg gctgcaacct ctgctggaac gccgtggtac acttccccat 300
 cccggctgcc gctgacacct ggggctcgc actccacgtg aggctccgcg cccagcgtct 360
 atacctgggc gatcgcgaca tcggcgaggt gtttgtgccc atcgacgacc tcctggccgg 420
 cgccgacaag ggtggcgatc cgaggcccgt gagctaccag gtgcgagggc cgcactctgg 480
 ccgcgcccac ggcgtcctct ac 502

<210> 464
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C11

<400> 464

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 ccccggttcg agcgtgcta agcaagagag cacgcctgcg gcaacgagga ctaggctgta 120
 cctctagagg aactacacag tgctggaacc ttcataatgg agcaagctcg cttacaagct 180
 ataatgggag acttctcgt agacaatctc actacggcca gcactacgca cgtctgcact 240
 cggtcatgg gcaccttcgg ttacctaaca ccggagtacg cctccagcgg caagctcacg 300
 gacaagtcgg atgtcttctc cttcggcgtc atgtgtgtgg agctgtcac tgggcgccgt 360
 cccatcgata ccattaactt cattgaggac agtctcttgg actgggcgcg cccgtgct 419

<210> 465
 <211> 210
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C2

<400> 465

ccgggtagac cacgcgtccg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagaaa 60
 aaaaaaaaaa aaggaaaaaa acaaaggag gccgccctaa aagttccaat ctaagctaca 120
 cgtgcatcgc acgttcaata ctcttcaaaa gtgtctccaa acttcatttc agtgaccgtc 180

gttttataac atcgtgacgt gggaaatccc

210

<210> 466

<211> 489

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C3

<400> 466

ccacgcgtcc gccacgcgt ccgagtggcc gtaccacagg tatcgtgctc gactcgggag 60

atggtgtgag ccacaccgtc cccatctacg agggatacgc cctccccac gccatccttc 120

gccttgatct ggccggtcgc gacctaccg actacctgat gaagatcctg actgagcgcg 180

gctactcctt caccaccacc gctgagcggg aaatcgtgag ggacatgaag gagaagctcg 240

cctacatcgc cctggactac gaccaggaga tggagaccgc caagaccagc tcttccgtgg 300

agaagagcta cgagctcccc gacggacagg tcatcaccat cggcgccgag cgcttccgct 360

gccccgaggt cctcttccag ccatacctca tcgggatgga agctgccggc atccacgaga 420

ccacctacaa ctccatcatg aagtgcgacg tggatattag gaaggacctg tacggcaaca 480

tcgtcctct 489

<210> 467

<211> 138

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-C6

<400> 467

ggtcgaccca cgcgtccgag gacgcgtggg cgacggcgct tccgtgatgg ggtccagcga 60

tatctggatc gaccacctgt ccatgagcag ctgcgcggac gggctggtgg acgcggtgga 120

gtgctccacc gcttgtct 138

<210> 468

<211> 500

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-C7

<400> 468

ccacgcgtcc gcaaacgtgt gccttttggg gacgcgatgt cgteccggcaa caagatcagc 60
gtggccttgc tgagcgtggc cctagtgggc ctgtcctct gccacctgc caccaccgcc 120
tccgccacc agaaagacat ccacgtctc ggcagcgtcg acggctccag cgacggcagc 180
agccccgagt ccgaaggccg cgtcgtctac gcggacatga agctggctga tacggaatcc 240
gatgcgccgg cgccggcgcc ggcgccgggg ccgtcgtccg gttgaactga gaagcgtgcg 300
tccagccaag caaggtggtc aaaaccgaga actaattaag ggctcgatcg tgtgtcaggc 360
tactactgtt cttgccataa ttatatatag atacgcanag tgtggccaag cctaccaca 420
tgcattgtat tgcattgctc cgaatatata ttatccgact cgatcctgcc aaattgtntc 480
gtcgacntca tgatatatat 500

<210> 469

<211> 202

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-C8

<400> 469

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ctcgtgtct ctctgtatct gcaactgcaa gcaaggaaat taattaaaag aagatcggcg 120
ccatggcggc aacgacgacg gggatgcaga tgatgcaggc gcagcaagcn gcggcggttc 180
tgctgtgctt ggttgtgttt gc 202

<210> 470

<211> 356

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-D1

<400> 470

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ccggagatgg acgagaagga ggtggcgatg cggagattcc tgngcagccg ggtgaagaca 120
gcgatggagc cgcggtcaga gtcggagcag ccgcggcgcc gggaggtggc tcggagcaac 180
gacgtgatcg aggcggcacg caccaagctg atgcagaagc gccagtgcag caaggtcaag 240
gcgctcgtcg gcgccttcga gactgtcata gacaccaaga aggacgccgc cgccggcagg 300
caaaacacat ctacgcaaat taacttaaaa catactgcgg ccggcgggac gcatcg 356

<210> 471
<211> 466
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D11

<400> 471

ccacgcgtcc gctcgaggag aagtcgcccg agtacgtggc cgtcaagaag gcgtcgtcga 60
caccgcagaa gagctcctcg tggctcggga ggagggcagg gtcgtcgctt ggtgggcttg 120
gacacagacg ggccgcttct gccgcgaagg tggacgatct aagcagcaga tccgcggggg 180
atctggtcat ggtgaacgaa agcaagggcg tctttgggct cacggacctc atgaaggcgg 240
cggccgaggt gatcgggagc ggtgggctcg ggtcggcata caaggcgggtg atggccaacg 300
gcgtggccgt cgtgggtcaag cgctcccgcg acatgaaccg ggcgaccaag gacgcgttcg 360
aatccgagat gaagcggctc ggcgccaatg cggatgccaa actgctgccg ccgctggcct 420
aacactaccg caaagacgag aagctcctgg tctacgagta catccc 466

<210> 472
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D12

<400> 472

cgcggtcga cccacgcgtc taaggacag gcgcaccaga ccccggcgac gcagacgaag 60
ctgttcctgg accccgcgat gcccttctac ggcgtgaagg tcgacgccgt ccacgtggcc 120
ggccaggccc tcgacatccc cgccgaggtg tgggaccca agagcggcgg cgtgatcctc 180
gactccggca cgaccctcac ggtcctcgcc accccggcgt acaaggccgt ggtcgccgcg 240

ctgaccaagc tcctggccgg ggtcccaaaa gtggacttcc ccccgttcga gcactgctac 300
aactggacgg caccgcgacc gggagcgccg gagatcccaa agctggcggg gcagttcacc 360
gggtgcgcgc ggctggagcc accggcgaag agctacgtga tcga 404

<210> 473
<211> 493
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D3

<400> 473

gggacgaccc acgcgtccgc tcgactccac tgcgtccgct gcacggaccg tgggcgacac 60
cgtgcaggac gcgtgcagca agacacaatt ccccaagatc tgcgtggaca gcctcaccgc 120
aaagccagag agccagaagg cgaccccgcg ccggctggcg gagctgttcg tgaacatcgc 180
ggccgagaag ggatccggga tggccacgtt cgtgcacggg aagtacaaca acgccaagga 240
cagcacccgtg ttcaagtgtc acgacagctg ctccggacgac gtcgaggagg ccgtcgccca 300
cctcaacggc ctcggtccggg agcccaccga cgccaagtcc ctggagctca agtcgtggct 360
ctcctccacg ctcggtggga cctccacctg cgaggacgcc tgcaaggacc tgcccaagaa 420
cggtcgacaag gacgacgtcg tcaacttcag cctcgacttc gagaagctgc agcgcgtcac 480
gctggacctc atc 493

<210> 474
<211> 483
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D6

<400> 474

gtccggtagt cgcggttcga cccacgcgtc cgccgtatat agtgtttgca gtgctgttgg 60
cgttctgccca ttatctcttc agtatggctt tccaattgtc cagaaatttt tggagggagc 120
ttccagcatt gacaaccact tctactcatc ttcatctgag aaaaatatac ctgtacttct 180
tggtttgctg agtgtgtgga atgtttcatt tcttggttat ccagctaggg caatattgcc 240
atattctcag gcacttgaga agttggcacc acatatacag cagcttagca tggagagtaa 300

cggaagggt gtttccattg atggcgccca acttttccttt gagacagggtg aaattgattt 360
 tgggtgaacct ggaactaatg gccagcacag cttctatcaa ttaatccatc aaggaagggt 420
 tacccttgc gactttattg gtgttgtaa aagtcagcag cctgtttact tgaaaaggga 480
 aac 483

<210> 475

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D7

<400> 475

agggtccggtt attccgggtc gaccacgcg tccgcggacg cgtgggtgga ggccgccatc 60
 acccgctccg attccatcat caccgcctac cgcgaccact gtacctacct cgcccgcgga 120
 ggggacctcg tctccgcctt ctccgagctg atgggccgcg agggcggtg ctcccgcggg 180
 aagggcggat ccatgcattt ctataagaag gatgccattt tctacggcgg gcacggcatc 240
 gtcggcgcg cagggtccct cggatgcggc ctgccttcg ctcagaagta caagaaggag 300
 gagacggcca cgtttgccct ctatggtgac ggtgcggcta accagggaca gccctttagg 360
 ctctcacat ttcggcctcc tggaagctgc ccgcaaaatt ggtttgcaag aacaaccatt 420
 atggtatggg aacaccggaa tggagggc 448

<210> 476

<211> 442

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D8

<400> 476

ccacgcgtcc ggcgcagcgc gcagcgcagc ccacctatca ataaccgacg agcgaggcgc 60
 gagaaccgac ttgccaccgg ctgctcgccg tctctctctc tccctcgggg cgcgcgcgcg 120
 ggagacaggc caaccgatcg tcaggcggcc agccatgggc aagcacgggc acggcaagtg 180
 ccacgacgtg gaggcgtgct acccgccggg ggcagcgggc ggcggcaagt acccgtagat 240
 gacggagaac ccgcagctgc ggtgggcctt catccgcaag gtgtacgtga tcgtgtgcct 300

gcagctgctg ctgacggtgg ccgtcgccgc gacggtgaac ctggtgcgcg ccatcgggga 360
 cttcttcttc tcccgcaaca tgggcgccat gttcgccatc atcggcgctca tcgtcgcccc 420
 catcctcgtg atgattccga tg 442

<210> 477

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-D9

<400> 477

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 aaaccttaaa cgtgccatgg aacacaccta cccaatgggt tattcttacc atttgaacat 120
 acacgaccat tttctacaca ccacttttga gtgaagattt acaggacaaa ggtggtagac 180
 gactgacatg ttctcagata tggtagcagg ctagtgggtt gtagtacagga tgagtgcac 240
 cggtagtttg tattgtattg tatctcacgt tctttgtact caagaatttt gttggctgta 300
 caggcagaag gcggtgcggg tagcatgcct tgcgtacata attatttgaa tacaagttga 360
 attgaaca 368

<210> 478

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E10

<400> 478

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 ttcaagggtg ctgcgtatga cacaaagcaa aagaaaatgg atttctttga tccatcaagg 120
 aaagatgatt tctgtttcat ctctggcaca aagatgcgca ctcttgccaa gaaccgagag 180
 agtctccag atggttttat gtgcccgggt ggctggaagg tactcgttga atactatgac 240
 agcttggtgc catctgaggg cagcagcaag ctgcgtgaac caattgcagc ctaaaatctg 300
 gaaaatcctt catataagga atgctactat atcttagcaa gcggttcttt gcgacataga 360
 accgatgcta tatgattgta tactggctgt aagactttta aacactaggc ttgattcgga 420

tgттаатггт gtgc

434

<210> 479

<211> 487

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-E11

<400> 479

gggtccggaat tcccgggtcg acccacgcgt ccgcccgaagc gtccggggaca atcttggttaa 60

cagagtttta aggtttccca gcagagaaga gcgcgtgcaa ccaccacatt catataatta 120

ataagcaagg tttagagaag aggcaacatg ggcacaaaga tgaagaaggg gatcctgaag 180

ccgttccgct atatctcaac catcatggat ggtaaggagg ctgaaatgca aattgggttc 240

ccgacggatg taaaacacgt ggcacatatt gggtgggatg gtcctggctc cacgaacaac 300

aacaacaata acaacagcaa caacaatagt ggcgaggacac ctagctggat gaaggattac 360

cactcggcac cgcttgactc gtcctctttt aggagtgaga gtggggggcac ggctgctgca 420

aatcncctggg cttctcaaga gatagtcatg gatggagcaa gcgtcggaga aacctccttc 480

aaggaca 487

<210> 480

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E2

<400> 480

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gcggggcacat gttgcgatgg ctgtggcggtt ggtgttcttg gtgagcggcg catggtgcgg 120

tcctcccaaa gtccccccag gcaagaacat cacggccacc tatggcaagg actggttggg 180

cgctaaagcg acatggtatg gcaagccgac ggggtgccggc cccgacgaca acggtggcgg 240

ctgcgggtac aaggacgtga acaagcccc cttcaatagc atgggcgcat gcggcaacat 300

ccccatcttc aaggatggtc tgggttgtgg gtcctgcttc gagatcaagt gcgataagcc 360

tgtggagtgc tccggcaagc ccgtggtggt gcacatcacg gacatgaact atgagcctat 420

cgcggcgtac cacttcgatt t

441

<210> 481

<211> 508

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E3

<400> 481

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caaccctaga aagctagaca ccgtacccat ggctcgcgct agcgtcgtct ttgtcattgc 120

cgctctcctc ttcgctcgcca tggctgtagc accgatggcc gaggcaaagt ccgccgatgc 180

ccctgtggct gacgcgccag ccgatggacc tagcggggccg gctgctgcac ctggccccc 240

gggtgtcgaa ggctgtcag gcaatgagga tgacgatgat gactccacca attgaggcca 300

cacacgtcgg cccgggttaa tttggaacaa gacatggaag aaaattgaga gcaatgtctt 360

aaaaacaatg ataaggtgtg gtcatcaact catcaatgga tacatccttg ctctccctct 420

tttcctttcg gtttgatttc caatgtgtaa ccatgttgta agttaacggg atcgactcat 480

ggatcagga tctaaaaaat tatcgttc 508

<210> 482

<211> 180

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E6

<400> 482

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cgatgcacat gtaaagatga aggtatgtgc tcatgctgtg ctagtgaaag ccttaaattc 120

agtgttctgt tgtctctctg gtggcgctact gtcactgttg actggcctac ggatctgagt 180

<210> 483

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E8

<400> 483

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tggaggtcac cctggtgtcg gcaaagacc tcaagaaagt gtcgctcttc tcccggaactc 180

gcatctacgc cgtggcttcc atctccggat tcgacctccg catcccttcc cacagcacc 240

aagcagacca cagcaacggc tgcaaccctt gctggaacgc cgtggtacac ttccccatcc 300

cggtgcgcgc tgacaccgcg ggcctcgac tccacgtgag gtcgcgcgc cagcgtctat 360

acctgggcga ttgcgacatc ggcgaagtgt ttg 393

<210> 484

<211> 501

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-E9

<400> 484

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gcgtcgattt aatgtgcggc tatggaaggc cttcacagaa tgttttaaca ctctacctgt 120

ggctgctctt atcgatgata aaatattatg tatgcacggc ggactctctc ctgatctagc 180

acacttggat gagataaaga acttgcagcg tccaactgat gtaccagatc aaggctctact 240

gtgtgacttg ctttggtcag atccaggaaa agatgctcaa ggggtggggca tgaatgatag 300

aggggtctca tatacctttg gtgctgacaa ggtttcagaa ttcttgcaaa agcatgatct 360

tgatcttatt tgctgtgctc accaggttgt cgaggatggg tatgaatttt ttgctgacag 420

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aatgatgagt gtccatgaaa c 501

<210> 485

<211> 487

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F10

<400> 485

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accggtcgca agccagttga ccacacactg ccccggtggc agcagagcct tgtgacatgg 120

gctacaccga ggcttagtga agacaaggtg aggcaatgcg tcgatccaag gctcggagac 180

gaataccctc caaaggctgt agccaagatg gctgctgtgg ccgccctctg cgtgcaatac 240

gaggggtgaat tccgtcccaa catgagcatc gtcgtcaagg ctctgaaccc cttgctgcac 300

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ctgtgatttc tcctgctgc gacaactttg ggttcacgaa aaaggaccgt cttgtggagc 420

gttgggtgtg ctgtgtcgtg actgccaaaag ccttggcgca gagaagagct ttgccatgca 480

gctgtgt 487

<210> 486

<211> 155

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F11

<400> 486

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aaaagaaaaa aaaaaaaaaa gataaaaaaa aaaaaaaata ataaaaaaa aaatagggggg 120

ggtcgtacta agggttcaag ttttttttca ggggg 155

<210> 487

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F12

<400> 487

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gcgtcgctca acttccgcat ccagggccac gacatgaagc tcgtggagct ggagggctca 120

cataccctgc aggacgtgta cgactcgctg gacgtgcacg tcggccactg cctctccgtg 180

ctggtcgacg ccgaccaggc gcccggcgac tactacatgg tggcctccac gcgggttcac 240

cacgacgcca agtccgcctc egccgtcatc cgctacgccg gctccagcgg cgccccgccg 300
 gcgcccaca tgaccgagcc accggccggc tgggcctggg ccatcaacca ggccagggtcg 360
 ttccgctgga acctgacggc cagcgccggc cgcccccaacc cgcagggtctc ctaccactac 420
 ggccagatta acatcacccg caccatc 447

<210> 488
 <211> 423
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-049-Q1-E1-F2
 <400> 488

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 aggggcaggg cccagctgag gccgcctgtc ccacacccaa ggttgcgccc gagggcactc 180
 caatctccgt tgagggttgcg gctgatgaac aggtagctga gaagggtgtg gtggaggagc 240
 cggctgcggc ggccgacgtt gagcatcaga aggctaata ggtggctcgt ccagaggcgg 300
 ccgtcgccga gcccgatcac aaggaggang aagccgtgga gaagaccgtc gtccaggang 360
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 cga 423

<210> 489
 <211> 492
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-049-Q1-E1-F3
 <400> 489

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 gtctgtccc ggtggatagg gcacgaaccc aagctccggc tcaccgggtg gtggcccggc 120
 caggcgcggt ggccggggcg gtgcggcctc ctgccccgac ctgggtcgg cgcgcgagg 180
 cgctggcag ccccgagcct cggcctcggc caggcgcgcg cgacccccag ccccggtcg 240
 ccggctcgcc ggtcatggtg gctccgatcc gggctcctcc ggcattgggca ggcgggggtt 300

ccccgggcta gcagcctctc ctggtgggca cggcctgcc cggcggctca ggaaggcgcg 360
gcggccccgg cgtgcacagc cgtggtccag ccatggcggc gcgggcacgc agcctcggct 420
ccccggcggg catccatggc gcagtaaggc cgcgagccc ggcggctagt ctgctcggcg 480
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<211> 477
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<213> Zea mays
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<400> 490

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aggccaagga cctggagttc aaccggaagg acgtgctgga gaagatggac aggtggcagg 180
cggcgctgga ggaggagtcc tggctcgagg agtacagcag aaacgagAAC agatacaacg 240
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aaatgccggt gatggcgga gctctgatgg cgaaggtagt cgcgtgggag aaggagagag 360
gcgccaagtt cgagtacgac ggtgaggtgc tgctggacgt gctggatgac tacggaaacg 420
cgaggaagga gaaggagcan gagcggaagc ggcagcgga ccagcgcgcg ctgctgc 477

<210> 491
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<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-049-Q1-E1-F5
<400> 491

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tcagcggcgt gctgggccag ctcaaggga tggccgtcga catgggctcc gagcttgaca 120
ggcaaacga agcgtggat catctgcaag gcgacgtgga ggagctcaac tccagggtga 180
agggagcaaa ccagcgtgcg cgcaagctcg tcgccaata ggccgcctag ctgcaacgtg 240

ggagcttgcg cattcctggg tctggtttgc gccacgattc agcctcgccg gttgattgct 300
tgctgtagca t 311

<210> 492
<211> 475
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F6

<400> 492

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cgccgcgcca tcggcttcaa ggacgcgctc accatccgcg ccaccatggg catggcggcg 180
caggacatgc agaactgcga cgagcagttc aggcagatcg gcgagaagaa ccccatggag 240
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tgatcgatct cttctccac ggacgacaac agagagccgg gcgttttggg ccctcgcatc 360
gtttgtcgcc gctgtaacg ttgcgatgcc catgccgcg agcgcgctct cgcgcgacaa 420
taactgatga gttaagtttg ttttgctttg accatctcac atcgttaatt cctgg 475

<210> 493
<211> 515
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F7

<400> 493

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tgagccggca cacgatccag gtgtaccgcg ggtcatggac ggcaatcatg ctgacgttcg 180
acaacgcggg catgtggagc gtgcattcca acatctggga gcggtactac ctgggggagc 240
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acaacgccct ccgctgcggc aaggtcgtgg ggctgccgct gccgcgctcc tacgcccccg 360
cgcgctaaga cgacgaaggc ctcgttttct cctcgtgggc tgaccatcca atccaaactc 420

aaaagaacaa atacgaaaga agcgtagtga aggggaacaa atgaatggat atatgtaatc 480
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<210> 494
 <211> 405
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-049-Q1-E1-F8
 <400> 494

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 gaggccgccc tctccacacc caaggttgcg cccgaggcca ctccaatctc cgttgaggtt 180
 gcggctgatg aacaggtagc tgagaaggtg gtggtggagg agccggctgc ggcggccgac 240
 gttgagcatc agaaggctaa tgaggtggtc gctccagagg cggccgtcgc cgagcccgat 300
 cacaaggagg aggaagccgt ggagaagacc gtcgtcgang acgagaagcc agcggcagcc 360
 gccaatgcag aggaaaaggt cgccaccgcc gccgaaaaca cgacg 405

<210> 495
 <211> 481
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-049-Q1-E1-F9
 <400> 495

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 cttttgttaa tatgatcgat tgtttttgtg tatgttacct ctttcctcga ctatatgctc 180
 ccccgctgctg aattgcaaca cacacacgca cccacacca cactggccgc aacgattaaa 240
 aaagcatcct gcgaagccta gtcagcagtt accgcctctt gggaagctga aatgtgcgct 300
 tcaggaagtg gctggcgacc tegtctcgc gatggcacag cacgcgcagg atggtgtttg 360
 gctcactgcg gctccaccgc ctggctcgcg gcggcaacgg taggcgctgc ctctcggaga 420
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g

481

<210> 496
<211> 481
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G10

<400> 496

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ctcagggagc tgtcctattc ttgtttctcc tcgtcgcagc agaggtggga accatcgatg 180
ccaaaatggg agtagccatg cccatgcatg ccttgataat ggagaaagcg aaacagcagg 240
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gtctccagtt cgagggcttc tgcttcaaca gcgacagatg cgccgatgtg tgcataaagg 360
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t 481

<210> 497
<211> 490
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G11

<400> 497

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cttgggtgtcc ccgaagtctg cgacgggtgca gctcgatccg cctcgtcgag catgtcgagg 180
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acctttggta gccgttgagc aaatgaacat gttgaagtgc attgtaactg cccccaacca 360
gcaaccactg tagcgcgtgc atcctccaat tcttctcagc tagttgcttc ttccagagat 420

ccccattgca gcgaatgcc aacggattta tgtgaccaa cacagcagat ttgcaagtca 480
acagcagcac 490

<210> 498
<211> 485
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G2

<400> 498

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ataaagatac caagttgaaa gaagaaaata ccagattgct gaatggtaac tctatggatt 180
cagctgatcg gaggccacgg acacaaatga atggaaagca aattgagaat gaaagccatg 240
ttgatagtga aactgtgaaa acatgatcaa ctatcaagga ggggatthttg ttagctaaga 300
gacgtttcag acgactaaag aaatatggga tgccatccgc tttggtgcct actgcctagc 360
tccttgacga cttcatgaaa tatagctacg aaggaaatag ttttacatct cgctgttcta 420
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ttttt 485

<210> 499
<211> 183
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G3

<400> 499

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ttcatagggc tcaggatcta gaaagtaacg gattcctact attacaatga ttcaacagat 180
tat 183

<210> 500
<211> 472

<212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-049-Q1-E1-G4

<400> 500

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cacaacacgg ccggcgcgga gcggcaccag gcggtggcgc tccgggtgca gggggacctc  180
gcgggcgttct acaactgccg gttcgacgcg ttccaggaca cgctgtacgt gcacgcgcgg  240
cggcagttct tccgcaactg cgtggtctcc ggcaccatcg acttcatctt cggcaactcg  300
gcgggcgggtg tccagaactg cctcatcatc acgcggcggc ccatggacaa ccagcagaac  360
tcggtgacgg cgcacggggc caccgacccc aacatgaagt ccgggctcgt catccagaac  420
tgccgccttg gtgcccgcga gaagctgttc ccggaccgct tcaagatccc tc           472
  
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<210> 501
 <211> 395
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-049-Q1-E1-G5

<400> 501

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gcgtcgggca accagcccaa gccgaacgcg atcgtggcca aggacggcag cgggcagttc  180
aagagcatcc agcaggccgt ggacgccgtg cccaagggcc atcaggggag gtacgtcatc  240
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ttcatgtacg gcgacgggcc taagcaaagc cgcgtgaccg gccgcaagag cttcgccgac  360
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<210> 502
 <211> 508
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G6

<400> 502

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aggcgaagaa gatccaggac gacttctgct cgacgctgtg cgagggcaag aaggggacgg 180
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cctgcagcgt cacctgcgcc aaggagaaga acccgcgcct cagcgagaac tgcaagaggt 420
cctgcacccc tctccttct tgaagcgaag ccccttgaaa tgaatgaacc atgcatgcat 480
gcatgcatgt atgcatgcgc cggggtga 508

<210> 503

<211> 507

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-G7

<400> 503

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cgctgtttgc ggttggtttg tgcaccaccc cgctcacctt ccaggttggc aagggatcca 180
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agcacggggg cgatgacttc tcttttacgc ctcaaggngg gcccgacggg cacttgaacc 300
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ggcaacggca tcgccaacaa cttcatcccc gccaatcca aggccggaac aacttacaga 420
acaacactca ccatctaata agcctctgat gatgaattat atttcaaaag agctcacctg 480
ccgctcacgt aagcaagaca atatattt 507

<210> 504

<211> 417

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-041-Q1-E1-G5

 <400> 504

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 acctgcagta aaattaaagg agggtcggag ggagatgctg ctggctgcca ttgcctgtat 360
 tcggttgat tccgtttata tatatatatta agtacttta tttgggtctg aacatgt 417

<210> 505
 <211> 423
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-041-Q1-E1-G9

 <400> 505

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 ccacctggtg cggtcagccc aacggtgccg gcgctcctga caacggcggt gcgtgcggga 240
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 tcaaggacgg caagggctgt ggctcatgct acgaggtgag atgcaaggaa aaacctgagt 360
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 aac 423

<210> 506
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-041-Q1-E1-H1

<400> 506

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caagttttca tgtctgatct cgacattcag atcccaactg ccttcgatcc ctctcgtgag 180
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cagcagcgta atggctgcaa gagcctgact accgtccagg gattgaagaa ggagttcagc 300
tacagcaaga tcctcaaaga tctcaagaaa gagttctgct gcaatggtac agtgggtccag 360
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<210> 507

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H2

<400> 507

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ccccatatgg caagaggagc taactctgac cgtcacagat cccagccaac cactgaagct 360
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<210> 508

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H3

<400> 508

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ttcaccgggc ggcaataatg gcctcgggtc cggctccggc gacgacgacc gccgccgtaa 180
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 gacagcca 428

<210> 509
 <211> 409
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-041-Q1-E1-H5
 <400> 509

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 gcgcagaagg tgatcctcat caacgacatg ttcccgggcc ctaccatcaa ctgctcatcc 360
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<210> 510
 <211> 419
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-041-Q1-E1-H6
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 gaggagcaac cgccggaacc agcggcaccg caagatgaga aagaagagga caactaggat 180
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<210> 511
<211> 426
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A1

<400> 511

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ccaccacgac ggaggagaag acggcggttct gggaacctga ccccgagacc ggatactacc 360
gtccggtcac cggcacgaag gaggtggacg ccgccgacct gcgcgccgag atgctcaagc 420
ggagga 426

<210> 512
<211> 208
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A10

<400> 512

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gccagccggc cggggatcag cgacgtcgtc gggcgctct ccttcctcgc cgacccgcaa 180
tactaccctc ccggaggcac ggaagctg 208

<210> 513
<211> 208

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-042-Q1-E1-A12

 <400> 513

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 ggagctggag aaggagtgcc ccaacgtggg gtcgtgcgcg gacatcatct cgggtgagcgc 180
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<210> 514
 <211> 386
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-042-Q1-E1-A2

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<210> 515
 <211> 417
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-042-Q1-E1-A4

 <400> 515

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 gtgaatgcga tcgtcatgtc cggcgagcgc atcttcacgg gccaccagga cggcaagatc 180

aggggtgtgga aggtgtcggc caagaacggc atgcacaagc gcgtcggcag cctgccccgc 240
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 cggtcggcgc tgtggatccg gcacagcgac gccgtgtcgt gcctgagccc gacggacccg 360
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<210> 516
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A5

<400> 516

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 ggtgctcctg gcgggcggca acgagcggag ctctcgtgcgc gccgaccacg ccacggtgga 180
 ggaggacttc cggagcctga ggcgcgcctt ctccacgtgc ggggaagggc tgggtccccga 240
 ggacgtggtg gcgcgggagg cagagacggc cgaggccgtc gtggagctca tggcacgctc 300
 cacggactac ctcatcgacg cgttcagcgt cgccacgtgc gactccatca gcgaggacgg 360
 ccgcgccggc gcagggcggg gcacgccgt gccgccaag acgcggacgt gggacccccg 420
 c 421

<210> 517
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A6

<400> 517

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 tggaaacgga gcagcagggc gtggttgccg cggatgaagc gacgcttgcc aaggggacgc 180
 cgtcggcgtc gttccggctc cgcaacggga gcctaaacgc ggtgcgcctc cgccgcgtgt 240
 tcgacctgtt cgaccgcaac ggggacggcg agatcacggt ggacgagctg gcgcaggcgc 300

tggacgcgct gggcctagac gcggaaccgcg gcgggctggc cgccaccgtt ggcacctacg 360
tgcccgcgacg cgccgcgggc etc 383

<210> 518
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A7

<400> 518

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agaacccgtt caacaagcgg cggcgggtgc tgcgctactg cgccaccgc tggaggcccg 120
cgcgtccgcc tcgctcgccg ccgccccgc cgccgacgta ggcagcggct gtggctagca 180
ctgaagaaga catgtacgcg cacgcagcga tgaagcaggc ggacggacga attgaaatga 240
aaacacacca gctagcaagc atgaagatgg atcctctcct gttttgggac cccttctctc 300
gtcttcatca gcatccgacg gcgtcatgca tgcattggata tatacaccgt acctagtggg 360
aaactgatat ataggttatt tcgttttttc ttttttttgt tgtgtgtggt t 411

<210> 519
<211> 344
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A8

<400> 519

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gtcaaacaaa ttttgtcgag aatttaaata cgggtatata tatagagaga agctacgcac 120
aacgacagca atggcagtag tttttttctt ttcttttttg ggtgtgtatg tgtaattgtg 180
tatatatata ctgtcgtagc gccaccgcct cctccaccgt ccaacggcac gtacggccgc 240
gacgacgacg tcaatgtatg gtgtgcgac ggtggagcca ggctgcgtga cctggcaggc 300
aggcagacca taccagacca gaccgaccgg ctcggcgaca acgg 344

<210> 520
<211> 217

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A9

<400> 520

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 cgctagtttg tgccccgctg atagcagagg caaagaagaa gagagtcgcc gccgccgccg 180
 ccgaggagaa gaaggtgcag gacaacttct gctcgac 217

<210> 521
 <211> 56
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B1

<400> 521

tactctacac taaatcgtgt tatggaaaaa agagaaaaaa aaaaaaaaaa agaaaa 56

<210> 522
 <211> 219
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B11

<400> 522

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 ggacgctagt gattacttat ggtacaccac aagctttcgc ttggagtcgg acgatttgcc 180
 ttttagaaat gacatccggc ctgtgcttca ggtcaaaag 219

<210> 523
 <211> 235
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B12

<400> 523

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 cgagaccccc ctcaagctcg ccgagtactt caacgtcacc gacgggggtgt tcagctacaa 180
 ccagatgggc gacgtgcccc ccgccgttaa cgggccactc catgtcatcc ccaac 235

<210> 524
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B2

<400> 524

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 cccccggacc agcagcgtct gatcttcgcc ggcaaacagc tggaggatgg ccgcacccta 180
 gcagactaca acatccaaaa ggagagcacc ctccaccttg tgctccgtct ccgtgggtgg 240
 cagtaagtca tgggtcgttt aagctgccga tgtgctgcg tcgtctggtg ccctctccat 300
 atggaggttg tcgaagtatc tgctgttcgt gtcagtgttg gtttaataat ggaccgggtg 360
 tgttgtgtgt gcgtactacc cagaactatg acaaatcatg aataagtttg ttgtttgaaa 420
 ttaaag 426

<210> 525
 <211> 408
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B3

<400> 525

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 gttgggtttg tcgtcaccgg ccgcattac tgcgacaact gccgcgccgg gttecgagaca 180
 aacgtgtccc acgccatcca aggcgcgacg gtggagatgg agtgccgcca cttecgatcg 240
 cagcaggtcc acgacaaggc ggaggcgacg acgggccccg gcggctggta caggatggag 300

atcagcggcg accaccagga cgagatctgc gacgtgcgcc tgctcaagag ccccgaggcg 360
gactgcgccg agatcgacca ctcccgcgac cgctgcccg tcccgcctc 408

<210> 526
<211> 370
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B5

<400> 526

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gccctgcccc gcttgcgcg gctggcgcg cagcatcgcc gccacgcccc gcgccgcgcc 180
ggcgcgaccc agccagcggc gcaggccgcc gactgccgaa cggcgcgccg gcaagcctgc 240
atgcgccacg ttcacgaagc gcttgccggc ctacagacatg gttcgtctgc ggcagcacgg 300
tcaaggccac cagggccagc acggggggcg ccatcaggat acagcgccgg cggaaggcc 360
acgccggtgg 370

<210> 527
<211> 329
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B6

<400> 527

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cgagctaccc gacccgccgt caccgttcag ctccaacacg gcgcaccacc ccgtctccgt 120
gccacacaca cctaggttgt ccttatcgtg ctcgtcgttc ggccacatgg tgaccccgcc 180
caccgacaca ccgccgatca cggccaccaa gaagcaggac gacaagccga agccgacgcc 240
ggaggccgcc accgcccga actacgcgtc gttgtggctg gccaaagcgc tcatgcagct 300
cgctgcccgc gctttccgcc gcatcaggt 329

<210> 528
<211> 416

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B8

<400> 528

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 acggaggacg acggtgtgcc taggcctgct gcttctacta ctggcggcgt cgactgcgac 180
 ggcacatttc tcgatcggcg acgtggacga gtacttgaac aggcgcacgc aggagtcccg 240
 ccacaggaac caccggcggcg cgcagatcaa tgacctcatc tccagtgtcg cgcgcttcca 300
 cgccaacgtg gatgcacgcg cgtatggtcg ccgctccaac ctgcagctgc aggaggagga 360
 agcagcagct accgcggggc gtgtaaccga agcagaagaa caggaggctt ctactc 416

<210> 529
 <211> 220
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-B9

<400> 529

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 tgggtccttc gacatcacca agttgggcgc ctccggcaat ggcaagacag acagcacgaa 180
 ggctgtgcag gaggcattgg catcggcgtg cggcggcact 220

<210> 530
 <211> 208
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C12

<400> 530

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 cctattgctt caccatctcc accaccacca gcgccagtgg tctcaccacc accgcccgtg 180

aaatcacctc cccacccgc gccagtgg

208

<210> 531

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-042-Q1-E1-C2

<400> 531

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tgctagcggg gccgcccgat gtcgccaacg ccggccacgc caagccccta acgcctggcg 120

ggcgcggtgt acacgacaac cacggcaagt tcacggccgg gccgtggaaa cccgcccacg 180

caaccttcta cggcggggcg gacgggtccg gcaccacggc gggcgcgctgc ggggtacaagg 240

acacgcgcac gcaggggtac ggcgtgcaga cggtgcccg gaggactgtg ctgttcggtg 300

acggcgccgc ctgcggaggg tgctacgagg tgcggtgcgt ggacagccct agcgggtgca 360

agcccgcgc gccagcgtg gtggtgacng tgaccgacct gtgcccgcgc aaggaccaat 420

ggtgca 426

<210> 532

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C3

<400> 532

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tagagatgct ggccgacaag cccacgtact ccacgttct gaagtcctg caggacacca 180

aggtcgccgg cgaggcgaat cagctccgg cggcgacgct actggtcgtc cccgacaaac 240

ttgccaagcc tctggggctg ctgccgcgcg ataagggtgc ggcggcggtg gagaaccacg 300

tccttctcaa ttacttcgac cccatcaagc tggacgagat gaagacacgc accgccatcc 360

tccccacgct gctctccgtc accgaaaaga aaactcggcg tcttcaacta cacca 415

<210> 533
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C4

<400> 533

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tgtacgccaa ctgggagttc tgcaagatgc aaggcatcgg ctggggctgg ggcggcgcca 180
tctgggcgtt cagcgtcgtc acctacttcc cgctggacgt gctcaagttc gccatccgct 240
acgcgctctc cggcaaggcc tggaacaaca tcaacaacaa gacggccttc accaaccgca 300
ccgactacgg caagggcgag cgacaggcgc agtgggccac ggcacagagg acgctgcacg 360
gcctcaacca ggccaacgcc acctccgacc tcttcggcga acaccagggg taccgcgag 419

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<210> 534
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C5

<400> 534

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tagatggaca ctacgacgag aagaggaaat ccaatgtgga atacacagag gacgagaaga 180
aagccgtgat cgcggtcttg aaaaagaagg ctttgagcgc ctcacagaag tttaggcatt 240
ccatgaagag ggggaggaag agcagcaagg tgatgtccat ctcgattctg gatgagcgtg 300
aacctgagga ggtgcaggct gtggatgcct tccgccagct tcttgactt gaagagctgc 360
taccatcgca gcatgatgac taccacatga tgctaagatt tctcaaggca agaaagtttg 420
atatcg 426

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<210> 535
 <211> 431
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C6

<400> 535

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gcggtcgacg gaggccaatt ctccaacttc ctccctcgt cgatcatcca gcaccagcag 120

gagaatcccg tcgaatcccc ctctcaacca agggcgcgcg cgcggtgcgta tgctctctcc 180

agatccaaag caacagacag cgagggggca ccgggggtccg ccgcatgttt gcgatttatg 240

gaggatcatg ctttcttgct tactacatta gtcctgacg cgccgccctc ccctcgcgtt 300

cattgatttc tgttataatt actaccgagc tactatctcc acattattat tggtaaagaa 360

agaaaggcg cctcctctaa ttgatgggc attccgtttc cttctcaact tcaacgcaa 420

caacagttga t 431

<210> 536

<211> 286

<212> DNA

<213> Zea mays

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<400> 536

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ataaacgatg actgaatgag ccaggcgtgt gtgtttttat aagctgagac gtaggaaaat 180

gtacaagatc ccatagaggg gtgcctgac aagggtggga gcttgcatcg gaagtggcag 240

caggaggcgg cgaaggcttg cttctttggc ggctgagcaa gttgtg 286

<210> 537

<211> 334

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D1

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gcgacagcgg ggggccggcg gacgctatgt ccgttggtga ggccgtgggg cccaccgggc 120
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 atccatcggc gggcggtccc aagactgcga ccac 334

<210> 538
 <211> 219
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D10

<400> 538

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 catgggttgc ggtggctcca aggaggccgt ggccaccggc aacaccagcg ccggcagcaa 180
 ggtcctccgg aggaagtctt cctccgtctc caccggcgc 219

<210> 539
 <211> 214
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D11

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 tcatgcacaa cctgcggcag tacgagcggc cgttgcaccg ctacatcgcc atgatggacc 180
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<210> 540
 <211> 236
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D3

<400> 540

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cgctgatgag gtgcaaccag ggatctgtct tctccaact gttgtagaag ggggccggtg 180
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<210> 541

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D4

<400> 541

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agggatgggg agggacgaga ggttcccagt gtgggaggcc gcgctcggcg ctgggggtcgc 180
cgccgccttc gccgctgggc tcgctggggg ttacctttcc atgccggact ccgactacag 240
cttctcaag ctgccacgta atctccagga actccaaatc ctcaactggcc atcttgagaa 300
ctatactagc gactacaccc tacagggtgt gtaggctac tgcgcggtgt acatcttcat 360
gcagaccttc atgateccag gaacgatatt catgtcactg ctttctgggtg ctctgtttgg 420

<210> 542

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D5

<400> 542

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cgatgacacg gacgatgtgc ctaggcctgc tgcttctact actggcgggc gcgctgacag 180
cgacggcgca ttacacggtc ggcgatgtgg atgagtacgt gtccaagcgc acgcaggagt 240
cccgccacag gaacaacggg ggcgcgggca tcgatgacct catctccagt gcggcgcgct 300

tccacgccaa cgtggatgca cgcgcctatg gccgtagatt cgacctgc 348

<210> 543

<211> 427

<212> DNA

<213> Zea mays

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aactaggagg aatggaccgc caccaatata tatcacacac acacacacac actcacacat 180

tctcacactc aagtctgcgt ttgccatttt tcattttcttt ttctctacga cttcgttatt 240

ccctcctttc atctatctct ccgtgaactc ggtttgctgt ccagctggct gtaagtgtac 300

cagatgcctt cgttacgtct gattaggctc atgacaatgg cgattttggc atggagttgt 360

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tgttgtc 427

<210> 544

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D7

<400> 544

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caccaacacc gtcattggcg tcggtgacga ctgcatctcc atcgggcccc ggacctccaa 180

ggtgaacatc accggcgtga cctgcggccc tggccacggc atcagcatcg gcagcctagg 240

gcggtacaag gacgagaagg acgtcacgga catcaacgtc aaggattgca ctcttaagaa 300

gacgatgttc ggcgtccgca tcaacgcgta cgaggacgcc gcctccgtgc tcaccgtctc 360

caagatccac tacgagaata tcaagatgga ggactcaacc aacccccacc ttca 414

<210> 545

<211> 420
<212> DNA
<213> Zea mays

<223> unsure at all n locations
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<400> 545

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<210> 546
<211> 214
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E10

<400> 546

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acatcgcggg cgccaagggt aggctggagt gcaagcactt cggcaccggc aagctcgagc 180
gctccatcga cggggtgacc gacgggaacg gcac 214

<210> 547
<211> 214
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E12

<400> 547

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ggcctggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc aagacagaca 180
gcacgaaggc tgtgcaggag gcatgggcat cggc 214

<210> 548
<211> 366
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E5

<400> 548

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tctctcttcc tccgtcgcgt cggcgtcgcc atcgccggcc atgggttgcg gtggctccaa 120
ggaggccgtg gccaccggca acaccagcgc cggcagcaag gtcctccgga ggaagtcctc 180
ctccgtctcc accggcgcaa gccacacctc caccacgtcg ccgtcgtcct ccggcgtcgt 240
cgtcaaggac gtcgtgaatg atgcccgggc tgccggcgag gtgatgacgc ccgccgacgc 300
cgacaagcct atcgctgtcc aaccaaggc agacgccatc gtggtgatgg acgccaagag 360
agagga 366

<210> 549
<211> 427
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-042-Q1-E1-E7

<400> 549

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ggcagtgtct cagggagctg tctattctt gtttctctc gtgcgagcag aggtgggaac 180
catcgatgcc aaaatgggag tagccatgcc catgcatgcc ttgataatgg agaaagcgaa 240
acagcaggag acggagaaga aggaggagaa aagcacggag aaggaagaga gtcaatgctt 300
atcgccgagt ctccagttcg agggcttctg cttcaacagc gacagatgcg ccgatgtgtg 360
catgaaggag agctttcccg gtggcgagtg caagcaggtc gtggncacgc gcaagtgctt 420

ctgcaag

427

<210> 550
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E8

<400> 550

ccacgcgtcc acccacgcgt cgcgccacgc gtccgctctg attgggcacg gcagtggcac 60
accttcgtct tccttttgtt tgtttttttc ctttcctctt tctgattttc atttaactaa 120
ttggtatcgc tgatgtacca gtttaatttg gtgccccgtt atttgttctt tccctcgaga 180
gagggatcga cacctgtacc attgcttgcc atttgtctgg accagttaa caattcaatt 240
taaccatcgc gtaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaaggaaga aaaaacaaaa agataaaaaa taaaaataaa cataaaaaaa 360
aaaaaagggg cggcccccca aagggttcaa actttaattc ccggtgcacg gaaattaaaa 420

<210> 551
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F1

<400> 551

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ctccaagttc ttccacatga acatgtaccg gtgcaaggac atgctgatca aggacgtgac 120
cgtgacggcg cccgggggaca gcccacacac ggatggcatc cacatgggag actcatccgg 180
gatcacgac accaacaccg tcattggcgt cggtagcagc tgcacatcca tcggccccgg 240
gacctccaag gtgaacatca ccggcgtgac ctgcggccct ggccacggca tcagcatcgg 300
cagcctaggg cggtaacagg acgagaagga cgtcacggac atcaacgtca aggattgcac 360
tcttaagaag acgatgttcg gcgctccgat caaggcgtac gaggaagccg cctccgtgct 420
cacgctctcc a 431

<210> 552

<211> 208
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-042-Q1-E1-F10

 <400> 552

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 tcttggcctt cgcggcgcgc gacgcgcgcg tggcgcggg cctcccgata tacgaggtcg 120
 ctgctgggcg gcgcgaacgt atgcgctcga gcatggatga cgtcccgggc aacttctccg 180
 tgccggggcga gtaggtgccg cgcctcac 208

<210> 553
 <211> 214
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-042-Q1-E1-F11

 <400> 553

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 cgtccgtccc tctcctcgtc tccgcctccc cggactccgt cagggagggga gggaggtgaa 120
 cgggcccgggg agagagatgg ggccggactc gtcgcccaag aagttgagcc tcaaggagca 180
 gcgcgctgcc tacctccagt ggttcgccct cgcc 214

<210> 554
 <211> 216
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-042-Q1-E1-F12

 <400> 554

 gcgccggacg atacaacaca ctatagtgag tcgtattaaa ccaataatag caagtgtgat 60
 catccgttga tccatcttgc taataaccct gcgtgccctt cgttctcgtc tcgatcccga 120
 cgacgtccc ttccggtccg gcaaaccaca tcaagtcgcg atggagatga agaaggtcgc 180
 ctgcgccgctc ctgcgcccg cgcctccgc caccgt 216

<210> 555

<211> 389
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-042-Q1-E1-F3

<400> 555

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gggtcgaccc acgcgtctac cgccacatca accatgggcg cctgcgcaac caagcccaag   60
acgcttgagg ggcaagcccc agctgaggcc gccgtctcca caccgaaggt tgcgcccag   120
gccactccaa tctccgttga agttgcggt gatgaacagg taactgagaa ggtgggtgtg   180
gaggagccgg ctgcggcggc cgacgttgag catcagaagg ctaatgaggt ggtcgctcca   240
gaggcggccg tcgccgagcc cgatcacaag gaggaggaag ccgtggagaa gaccgtcgtc   300
gaggaggaga agccagcggc agccgccaat gcagangaaa aggtcgccac cgccgccgag   360
accacgacga cngtggangc gaagaagaa                                     389
  
```

<210> 556
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F4

<400> 556

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gggtcgaccc acgcgtccac tgategacat agtgacggtc aaggcccccg ggcacagccc   60
caacacggac ggcatccaca tcggcgactc cagcaacgtg accatcagca gcaccaccat   120
cggcgctcggc gacgactgca tctccatcgg ccccgggagc aagatgatcc gcatccatgg   180
cgtcaagtgc ggcccaggcc acggcatcag cgtcggcagc ctggggcgct acaaggacga   240
gaaggacgtg gaagacgtgc aggtgacggg gtgcacgata gccggcacca cgaacggcct   300
gcgcatcaag tcgtacgagg actccaagtc gtcgctcaag gccagcaagt tctgttacga   360
gggcatcacc atggacaatg tctctaccc catcatcatt gaccagaagt actgccccaa   420
caacatctgc gtcaag                                     436
  
```

<210> 557
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F6

<400> 557

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gggtgttcctc ctccctccgac tcagcatggg cgcgcgtcgc ctggctgcca tcgccacagt 120
agtgtctcgcg gaggaagccg atccgcgggc actgccggca cagtggacca ccgcgaagaa 180
gtacaaggcc acgatggacg ccaagacgcg gcaggctttc gacggcgtgg tggccgccgc 240
tacggcagag aagcgggtccc aggcgggtgga ggccgtgctg cagcagcagc tgaacatgga 300
cgtgtccctg tccaaggcga cgtcttccgc ggacgagaac aactacgtga gcgtggccgc 360
cgcctacgag aaggccgcgg gcgccgtcat cgcggcgacg ccggacaaca agctccgcgc 420
atggcggtcc cgttcgac 438

<210> 558

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F7

<400> 558

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cacacaccgt ctccgcccgc ccgcgcgcac gcgccatggc tatggctcgc tccgtcgcgc 120
acctcttctt tcccatcctc cttatctcca ccgcgcccgc cgtgcggggc atcaccgacg 180
ccgcgggcgg ccccggtatac ctccaggagg cgtgcaacaa gacgctgttc cccaagggtg 240
gcatgcacgc gctcaaggac aaccagagt gccaggcgga gacggcggtc acgccgcgcc 300
ggctggccga gctgctcgtg tacgtgtcgg ccgaggtggg catgaccgtg gccgcgttcg 360
cgcaccacga gctcaacgcc atcaatgacg acgacgtcct gtacaagtgc atcgacacct 420
gctccgagga catccaagaa g 441

<210> 559

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F8

<400> 559

ccacgcgtcc gggaatgtat gggtttgcgt gaagtaaagt ctttgcggcg catgaatcat 60
cctaacattg tgaagctcaa agaggttatc cgagaaaatg atatattata cttcataatg 120
gaatacatgg agtgtaatct ctaccaactt atgaaggata aggtcaagcc tttctcggag 180
tctgaagtcc gcaactggtg ctttcagata tttcaggctc ttgcttacat gcatcagagg 240
ggctactttc atcgtgacct caaacctgag aatctgttgg ttagcaaaga tgtcataaag 300
ctagcagact ttggtcttgc aagggaagtt tcatctttgc cgccatatac agaatatgtc 360
tcaactcgct ggtatcgggc accagaagta ttgctccagt catctgctta tg 412

<210> 560

<211> 222

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F9

<400> 560

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gcctccaggt cctccatcct acttgcaacg gcgatgctgg ttgcgctggt tgcgggttgg 120
ttgtgcacca ccccgctcac cttccaggtt ggcaagggat ccaagcctgg ccacctgac 180
ctcaccacca atgttgcaac catatctgac gtggagatca aa 222

<210> 561

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F11

<400> 561

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gtcctcgtgg ccacggccat agccgccgct cccggcggtg ggtttgtcgt caggggccgc 120
atctactgcg acaactgccg cgccgggttc gagacaaacg tgtcccacgc catccaaggc 180
gcgacggtgg agatggagtg ccgccacttc gagtgcgagc aggtccacga caaggcggag 240
gcgacgacgg gccccggcgg ctggtacagg atggagatca gcggcgacca ccaggacgag 300

atctgcgacg tgcgcctgct caagagcccc gaggcggact gcgccgagat cgaccactcc 360
cgcgaccgc 369

<210> 562
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F12

<400> 562

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ggcgcaatct ggcaccggcc atcacgttcc ctccggccgc tccccctcc ctgccctccc 120
tttccccaga tgggaagcca ttaaaaccag cggatctcac ctcgggggcg gtccgcggca 180
tctgggcaag cgagtggtag agccagcagc catgagatgg tatgcatcg tagcctcctg 240
agggcgctgg tctgagtgcc ggccggcgtct gcgggcaggc gccggggggc caggatcctg 300
tgtggccacg aggcggatgt acgcgtgact cctcggcacg gacacggctg gcgcggattc 360
cgggcagtca cgggaaggat gatgctggac t 391

<210> 563
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F3

<400> 563

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gtgctcgaga gcctggcgta cagcgtcatg tcccgcatcg aggacgtgct gagcgcgga 120
gcggcgggcg agaacctgac ggcgagcgag gcggcgcggc gagcgctgga gtcgacgtcg 180
gcggagctgc ccgcgggcgga gaagctggac gccaaaggagg agctggagaa gctgaacgag 240
gccccggcgt cgatgacgct gttcgacttc atgggctggc acttcgacca ggacgagctg 300
atgaagcgca gggaggacgg cacactggac gcggacgggg aggccatgct cctcaagaag 360
gcgcctagca tggcccccaa gaagttctcc tacgtcgaca gcctctctc cgggggcatg 420
aggagcccct ccgcgcgcca ctgat 445

<210> 564
 <211> 435
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-034-Q1-E1-F4

 <400> 564

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aattaccggg tcgagccacg cgtccactcg actccgcca gtttttccac caggcgctgt   60
acctgggggg cgtcaccgcc gccccgctc ggcccacgct ccgcctcatg aagcagaacc  120
tcgcgttctt ctgagcgagg gtcaccgagc agggccagct gccggccgtg ctgaggtga  180
tgagggcctc cgtggaggcc ttctgacgg tcgtcctcgc tggcggcagc gggcgggcct  240
tcgcccgcgg ggaccacgcc gccgtggccg cggacttcgc gagcttgaag cgcctgttct  300
gcagtttcgg ggtcggggag gaggcggtcg agaggagac ggtgcgggag gaaggggtgc  360
tggcgtcat ggccgttccg acggaacagc tcattcatga gttgctcggc cactatgctt  420
ccactccgat gagag                                     435
  
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<210> 565
 <211> 414
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-034-Q1-E1-F5

 <400> 565

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ccacgcgtcc accacgcgtc cggcccttgg aaggaccccg aaatcatgaa gatggttcaa   60
agtgtgatg ggaggtgtgg atcactcggc acggcctctt tcgaggctcc ggagaaaatg  120
atgtgtgaag acgacacgta tctaagaaa caagctttgt ttgatgggga aacacaatta  180
gctggagacg agcattctca gtcacagaaa atttcccggt gccggattga acatcctcac  240
gtgtcacctc ttacagagga acttatcccc atttcaattc atacccttgg atcaccttat  300
tcttgtgatg tcccgatggg tgaagaggcc atagacgcca tctgcaagag ccacggaaca  360
ccaccagatg agaagattgc catcaccaaa gctattataa atgtatcgaa tgga       414
  
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<210> 566
 <211> 411

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F6

<400> 566

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 tggcaaggga tccaagcctg gccacctgat cctcaccgcc aatgttgcaa ccatatctga 120
 cgtggagatg aaagagcacg ggggcgatga cttctccttt acgctcaagg agggcccgac 180
 cggcacctgg acgctcgaca ccaaggcccc gctcaagtac cccctttgca tccgctttgc 240
 tgtcaagtcc ggtggctacc gcatcgccga cgacgtcatc cccgccgatt tcaaggccgg 300
 catcacctac aagaccacac tcagcatcta atcagcctct gatgatgaat tatatttcaa 360
 aagagctcac ctggcgctca cgttagcaag acaatatttt ttctatgggt a 411

<210> 567
 <211> 187
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-034-Q1-E1-G10

<400> 567

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 tcgtgtcatt aagctagatt acaagcagag cgaaagcaag tgtgctcttt tttagggtcg 120
 gggtaattan cccccgggtt ctcatgctcg ggtttggttt actggtttga ctgttgcgta 180
 acatttc 187

<210> 568
 <211> 371
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G11

<400> 568

ccacacgtcc acccacgcgt ccgattcctg ccaagataaa ggtaatggag tcgtcacgca 60
 ggttcagcc ggccgtcatc ctgcttctcc tgctcattgt gtccaccgat atggcacagg 120

caaggggaatg cgagaagtac agtgagcgat ttgttggggc atgcatgac gcagacaact 180
 gcgccaatgt gtgccgcggt gagggcttct tggccggcag gtgcagcacc ttccgccgcc 240
 gctgcatctg cactaggcag tgctaaacaa gatcgctcga tcgttcgcca tgcacgcaca 300
 acctattctt aataacgttc attatctcgt tcttatttat gacgaatgtc atgtatgttc 360
 tgggtgactgt c 371

<210> 569
 <211> 152
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-034-Q1-E1-G4
 <400> 569

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 aaagggcgga cgcacaaaaa agatcaaaaa cttaaataaa catgcatgca aaaatcaata 120
 actcttcggt aggggtcacc tatcattcaa tt 152

<210> 570
 <211> 197
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-034-Q1-E1-G5
 <400> 570

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 caagaacttc tagggtcgga tcggggagct gagccgcgcc cttctttata tgtagatata 120
 tgcacgaagc ggattatatt ggactgttgt actgtgtact accttgttta ttccatgatt 180
 aacatattgt tatattg 197

<210> 571
 <211> 363
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-034-Q1-E1-H1
 <400> 571

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 gtgatgactg tcacgatggg catgatgagg agccgtccca agctcgatcat gttgtcgggt 120
 cggagattct tgancttggg attgtatcgc actcagtgat catccggcta tctttgggcg 180
 tctcacagaa tccttgcacc atcaaacctc taagtgtctg tctctccttc caccagtttt 240
 ttgagggctt tgcatttggc ggctgcattt ccgaggctca gttcaagagt ttctctgcac 300
 tccttatggc tttcttcttc gctatcaaaa gacctgtctg gattaccgtg gggctctggta 360
 tcg 363

<210> 572
 <211> 347
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-034-Q1-E1-H11
 <400> 572

gggtcgaccc aaacgtccga atcccttgtc gatgttccac acacatgcag gggaactgac 60
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 gcggttggtg ggcgtgtccg tcgcggcgaa catctcgggc ggccacctga acccggccgt 180
 gacgttcggg ctggccgtgg gcggccacat caccatcctg acgggcgtct tctactgggt 240
 ggcccagctg ctgggcgcca ccgtggcgtg cctgtctctc gggttcgtca cccacggcaa 300
 gcccatcccg acgcacgccg tcgcgggcat cagcgagctg gagggcg 347

<210> 573
 <211> 317
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-034-Q1-E1-H3
 <400> 573

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 cgccacatct attaggtgca gccatgggtg cctgtgcaac gaagcctaag acgcttgagg 120
 ggagggcccc agctgaggcc accatctcca caccgaaggt tgcacctgag accactacca 180
 tccacattga ggttgcggca aaacatgcag tagttcagaa ggtggaggag gacaaggagg 240

aggcactaac agtggcggcg aaacaagagc cagcagccac cattgagcct cagcagattg 300
ctagtcaggt gaccact 317

<210> 574
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H4

<400> 574

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gtggacggca aggagcgggt cggttcaac ggcgtgtcgc acgtcgacc cgagacccgc 120
gtcgggctcg ccgagtactt caacaccacc gacgggggtgt tccagtacga catcatcggc 180
gacgtgccgc cctccaagtc cgcgcccacc aagatggccc ccaacgtcat ccgcgccgag 240
ttccgcacct tcatcgaggt ggtcttcgag aaccccgaga agagcatcga caccatccac 300
atcgacggct acgccttctt cgccgtcggc atgggcccgg gcaaattggac gccagcgtcc 360
cggagcacgt acaacctcct ggacacgggtg agccggcaca cgatccaggt gtacc 415

<210> 575
<211> 402
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H5

<400> 575

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gcctctcctg gcgtcgatgc tgctcgtcgg gtcgccgtg ggctccgagg aggaggagga 120
cggcggcggc aaaaagaagc cccacgtcaa ccacggcaag ttttaaggcg agccgtggac 180
ggacgggcac gcgacgtact acggcggggc cgacgggtta actgacacca cggacggcgg 240
cgctgcggc tacaagggcg agctggggaa agactacggc accctgacgg cggccgtggg 300
cccgtcgtg tacaccaacg gcaccgggtg cggcgcgtgc tatgagctca agggcccca 360
gggcaccgtg gtggtgacgg ccaccaacga ggccccgcg cc 402

<210> 576
 <211> 364
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-A1

 <400> 576

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 gcccgctcgc tgaaccatgg cgggctccgc ggtggccgctc gtcctcctgt cggccgctcgc 120
 gctgctctgc ctgtaccacc tccttttccct ctccctgtcc gtcccggacc cggcagcagc 180
 agcagcagcc gtcccccgcc gcgccgggtg ccaccgtggc agcaacgttc cgtccgggtc 240
 aggaaccgcc aacgtcgtcc tccgcttcgg cctgtccggg cagccgctcc gcctccacga 300
 ccccgccgcc gccgccgggc tcccggacat cgacaccttc cgcggcaagc tcgagcgggt 360
 gctt 364

<210> 577
 <211> 340
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-A12

 <400> 577

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 tcgacccggt gtcgaagcag gcctccgaga aggaggcggg ccccaacatc tccgtcaagg 180
 gctacgacgt gatcgaggag atcaagacgg agctggagag ggagtgcccc agcgtggtgt 240
 cgtgcgcgga catcatctcg gtgagcgccc gcgactcggg gaagctgtcg ggagggcccg 300
 aatacgcggt gtccttggg cggcgcgact cgctcgtgtc 340

<210> 578
 <211> 447
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-A2

 <400> 578

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 gccctcatcg aggacccgca gacgagggcg atgggtggaga acttcgcccg gaacgagcca 120
 ctgtggcagc agaagttttc ccaggcgatg cagaaggctg ggatgcttga cgtgctaadc 180
 ggcgagggca agggccaggt aaggaagcag tgccgcctgg tgaacgggca ggagaaggag 240
 cagaagcagc agcagccacc ggaggagcag gaggagcagc agccaccgga gctggaggag 300
 gaggagcagc aacagccgca tcagccacag cttccatggt tcctgcagag gcagcgcccg 360
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 <223> Clone ID: LIB148-035-Q1-E1-A4

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 tgtggcggca ggcgtttgca caggcgatgc ag 152

<210> 580
 <211> 419
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-A5

 <400> 580

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 attaaggaaa gaacttgggc tctatgccaa tgtcaggcct tgcaacagcc tcccaggcta 240
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 tattggtctt gagcatcacg ttgtgacacg tgtttagaa agtttgaaaa ttactaccgc 360

ccaagcaagt ttgacagtgg cataatatgc ttttcattat gccaaaggcca atggccggg 419

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<223> Clone ID: LIB148-035-Q1-E1-A6

<400> 581

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tgacttgaaa gcaaatgagg atgatctcag gcgattcttc tctgatattg gtggtgccac 180

agcaataaga ttgctgaggg acagattcac caaaaaatca aggggggttg cctatgtgga 240

cttttttagac aacaagcatc ttgaggcagc tattaagaaa aacaagcaga agctgcttgg 300

aaagaaagtg agtatcgcgc gatcagatcc aagcaagggt aagaagagcc gtgaagcagg 360

tcaaacaatc caggataatt tacctccgag tgggtggtgat gatgcaaaag caacaggatc 420

cagtggacca gac 433

<210> 582

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-A8

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gtgtggataa cctgttcagc accggcaagg gaaaccttga cgggcagggc ccagccgtgt 180

ggagcaagaa ctctgcacc aataagtacg actgcaagat ccttcccaac tcgctggtga 240

tggacttcgt gaacaacggg gatgtgtccg gggtcacgct gctcaactcc aagttcttcc 300

acatgaacat gtaccggtgc aaggacatgc tgatcaagga cgtgaccgtg acggcgcccc 360

gggacagccc caacacggat ggcattccaca tgggcgactc atccggga 408

<210> 583
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 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B1

<400> 583

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acacaatcca ccaatctgat tggattcggg ggaatgcttg ggcaaattcg aatttgctca 180
ggcattcgtt ccgattgcgg ctagctagct gatcgcttaa tcacccgacg cgggcaaatt 240
tgcacggcga cgacgatggg catcttgtgt tgtttccagt cccacaccag cgatcacgct 300
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cgccgttgct cccc 374
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<210> 584
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<223> Clone ID: LIB148-035-Q1-E1-B10

<400> 584

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ccacgccgga caccttccca ctccgcatgg gatccaagcc tggatcatctg atactcaacc 180
gcaacgttgc cagcatgacg cgatgtggag atcatagaac acggtggtga tcacttctcc 240
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catccccgcc gatttcaagg ctggcaccac ctattggacc acac 404
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<210> 585
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B12

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agatctttgt cccctacaga ggattcttca accggaatgg ggtggaagta tccgaggtag 180
tattggaaga ggcagacgtg tccaaagcca ttctagggtta catcactgca aacaagatcc 240
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acgtgccgtc gaccctgatg aagtgcgctc cagactactg caacatctac gtcgtggcca 360
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c 421

<210> 586

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B4

<400> 586

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aaaatgtggc gacctataca caaaacactg aaaactgggt acagttctcg cattctctgt 180
tttagttgag tttgcaggta gtagagacga catgactcag tcaaccgctt gttctttgac 240
aacgacggct gctgcagcaa gtgggccatt gttagcgtca agcttcaggg agacatcctt 300
gaacatcttg cggctgaggg tgttgtaaac cgctctcgag tactgccgcg acgtgttcct 360
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<210> 587

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B5

<400> 587

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 ggggtggggg ggggggtggg gggatggggg ggggccgggg gggggggggg gggggggcgg 240
 ggtggggggg cggggggggg ggtggggggg gctggggcgg gggggggggc gggggggggg 300
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 gggggcgggg ggggggggtg gggggggggg gg 452

<210> 588
 <211> 419
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-B7
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<210> 589
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 <223> Clone ID: LIB148-035-Q1-E1-B8
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 caaaaaaagc aaagaaattc atgggggggag acagagtgag atgggtgctc agctggccag 180

gctcgagca gccgcctgcg tcggacgggc cgcgttggtc gccttcggcg cctcgctctg 240
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<210> 590
 <211> 281
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C1

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 gacgatgtat agtttcgtcg actgcttcac acacatatat agcagcccaa ttaatgtaac 180
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 <211> 262
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C12

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 gcagctcaga ttgtggggtc ag 262

<210> 592
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 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C4

<400> 592

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gaagagcgac gtctacagtt tcggtgtgat ccttctggag ctactcaccg ggcggaagcc 180
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gagcgaagac aaagtgaagc agtgtgtcga tccgaagctc aacagcgact accctccaaa 300
ggcggttgca aagctggcgg cggttgcagc gctgtgcgtt cagtacgagt ccgacttccg 360
gccaaacatg accatcgtgg tgaaggcgat cagcctctc ctgaacgc 408

<210> 593

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cacgacgtga tcatgctgag gcggacgagg agcggggcgg cattcccgcc gccgatctcc 300
gtgatcgga agggcgggcg gccgtggctc tgccctgcgg cgacccgca ggggtggacg 360
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<210> 594

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C7

<400> 594

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<210> 595
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 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C8

<400> 595

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 aacctgatcc ctactgccca tctgagagat caagtgcgca gacagggtcca agtcca 356

<210> 596
 <211> 52
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D1

<400> 596

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<210> 597
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 <212> DNA
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<223> Clone ID: LIB148-035-Q1-E1-D2

<400> 597

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ccgcgccaaag ccgagagaaa gatggagatg atcaagagga tcgctcatcg ccgcgctcct 180
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<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D5

<400> 598

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cgcgcatcaa gctgctgcgg gcgcaggacg acgtggtgac cgggatgaag gagagcgccg 360
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<210> 599

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D7

<400> 599

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gccattcggg agcagcaatt cgctgccaga gttgggacca gatggcacac aagatctagc 300

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ggattccgat gacttcgagg ttgcaacgaa ttgctcgtca ga 402

<210> 600
<211> 409
<212> DNA
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<223> Clone ID: LIB148-035-Q1-E1-D9
<400> 600

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<210> 601
<211> 387
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-035-Q1-E1-E1
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<210> 602
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<212> DNA
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<223> Clone ID: LIB148-035-Q1-E1-E10

<400> 602

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<210> 603
<211> 243
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E3

<400> 603

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gcaaccaatt ttataggtca attcttttat ttgtataaaa aaaaaaaaaa aaaaaataaa 180
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aag 243

<210> 604
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E5

<400> 604

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 tcgacaacgc gggcatgtgg agcgtccggt ccaacgtctg ggagcggtag tacctcgggg 360
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<210> 605

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E7

<400> 605

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<210> 606

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F1

<400> 606

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<223> Clone ID: LIB148-035-Q1-E1-F10

<400> 607

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<210> 608
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 <212> DNA
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<223> Clone ID: LIB148-035-Q1-E1-F12

<400> 608

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 cttttcacat gtttgtgatg taaatgccca tactagaatg tcaccaaagt gttgattatg 240
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<210> 609
 <211> 382
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F3

<400> 609

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ggcaagccgg tgggcacggt ggggagcgcc acgctggcgg tggagtcgga ctacttcacg 180
gcgtacggcg tgggtgttccg gaacgacgcy ccgctggcca agcccggcgc caagggcggc 240
caggcggtgg cgggtgcggct gttcgggacc aagacgcaga tctacaactg caccatcgac 300
ggcggacagg acacgctgta cgaccacaag ggccctgcact acttcaaggg ctgcctcatc 360
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<210> 610

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F4

<400> 610

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tgttgtccat ggcgcggaag catcagcatg ttgccatatt taccacagcg tgcttgccgt 120
ggatgactgg gactgcggta aaccactgt ttcgggctgc ataccttgcc aaggctggag 180
attgggaggt cagcgtggtg gtgccttggc tgtccaaggg ggatcaggag ctcgtttatc 240
caaacaagat gaggttcagt ttgccggcag agcaggaaaa ctatgtgcgg cgggtggcttg 300
aggaacggac tgggctgttg ccgaagtttg acataaagtt ctatcctggg aagttttcaa 360
ctgagaaaag aagtattcta cctgttggag acatcagtca gacaatatct gatgat 416

<210> 611

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G1

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ataaggtccc gcccttttcc gacattcaca ggggggacag gaaatcagcg gccatggcct 120
cgattccggc gacgaccttc gccgtcatct tatccgtcct cttctgtgcc gcggctggca 180
ccgccgtcga caacgacctc cccgactacg tcattccaggg ccgctgttat tgcgacacct 240
gccgcgccgg gttcgtgacc aatgtcaccg agtacatcgc gggcgccaag gtgaggctgg 300
agtgcaagca cttcggcacc ggcaagctcg agcgtccat cgacggggtg accgacgggg 360
aacgcacgta cagatcgag ctca 384

<210> 612

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G10

<400> 612

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aggcgtcgtg tccggcaacc tccgcggccg tggcgggcggc gagggccgat gacgccctgc 180
gccagcgccc gcgggggctc gtgcagggtcc gggagcgggg ccagggcccc ctgtcgacgg 240
ggcaccagca cctgcaccac catcaccacc agctgcggcg gtcggcgggc tccccacccc 300
gccgcccggg gccggggcgc cgccctcctc agcgtgcga aagcgacctc aacatcaggg 360
agcaccgctc ctgcagcgag gtggccggcg gcac 394

<210> 613

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G11

<400> 613

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aggtccgagc ggccgagcgc caggaactgc ctgcccgacg agagccacgt gtgctggagg 120
aacggcaagt tcgcgcagga catgatcctc cggctcagga acgtcgagag cggggagata 180
cagctgcagc tgcaagtggg gaacttcctt cctggctctg ctctgtctgc tgcaacaacc 240

aggtgacctg atgatcgatg gtagctgctg ttctgtctgc cattgcctcc tgctggcagg 300
aacaggaact ctctgaagca cggggtcagg gtagttcatg ttgcttcgat tcgatcgtag 360
gggagataat gccggatggc tttgtaaaagt ttgggaggac atgcat 406

<210> 614

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G12

<400> 614

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gtaggcggtg cctgggtgtg tcttcccaag gttcccccg gtaagaacat cacagccaaa 180
tatggtagtg attggctaga tgccaaggcg acatggtagt gcaagccgac aggtgctggc 240
cccgcgcaca atgggtggcg ctgcgggtac aaggacgtga ataaggcccc tttcaatagc 300
atgggcgcgt gtggcaacgt ccccatcttc aaggacggtc taggttgttg atcctgcttc 360
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<210> 615

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-H9

<400> 615

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ttcagttact gaagatggtt gctacatcca tgagctgtgt ggggtctccac gggatgttct 180
atctcgctgc agctgtgtct gacttctatg ttccatggga tagcatggca aaacataaga 240
tccagtcagc ccgaaggccc actggatatg aagctcagcc aggttcctaaa aatgctcccc 300
gttctgcgca accattgggc ccccttggcc ttctgcgtat ccttcaagct ggagacggat 360
ccagacattc tagttcagaa agcagagacg gctc 394

<210> 616
 <211> 279
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-A1

 <400> 616

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 tgacggcgag gcgagctcga gcgcggagcg ggtggccact ggtataaccg acggggacct 180
 ggatgagctg aggggatcca tggatctcgg cttcaggttc gacgagcaga acggcggccca 240
 ggacctctgc gacaccctcc ccgccctcga cttctatatt 279

<210> 617
 <211> 409
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-A12

 <400> 617

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 gctagcggtg gtcgccgatg tcgccaacgc cggccacgcc aagccccctga cgctggcg 120
 gcgcgtggta cagacaacc acggcaagtt cacggccggg ccgtggaaac ctgccacgc 180
 gaccttctac ggcggggcggg acgggtccgg caccacggcg ggcgcgtgcg ggtacaagga 240
 cacgcgcgag caggggtacg gcgtgcagac ggtggctgtg agcacggtgt tgtttggcga 300
 tggcgcggcc tcgggcgggt gctacgaggt gcggtgcgtg gacagcccca gcgggtgcaa 360
 gcccgcgcg gcggcgctgg tggtagcggc gaccgacctg tgccccccc 409

<210> 618
 <211> 293
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-A2

 <400> 618

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tcatatcgag tttgcaacct gtattgaaat tactacgtgg acggagagcc agcggcagca 120
gcccattgcat cggaaaaggt cgccaccgcc gccgagacca cgacgacggt ggaggcgaat 180
aagaacgccg aggaggcccg gaaggagaag ctggcgcagc aacgctgac gactgtccgt 240
gcatgctgac caattaatat aattggctga tgatgcctga tgttcagtgt gtg 293

<210> 619
<211> 286
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A4

<400> 619

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aaccactgca caggatgtcg tggcagacgt acgtcgatga gcacctcatg tgcgagatcg 120
agggccacca cctgagctct gccgccatag tcggccacga cggcgccggt tggggccaga 180
gcaccgcatt cccacagttc aagccacagg agatgaccaa catcattaag gacttcgacg 240
agcctggggtt tctggccccg atctgcctct tccttggccc caccaa 286

<210> 620
<211> 57
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A6

<400> 620

ccgggtcgac ccacgcgtcc aaaaaaatc atattatgaa gcaaaaaag aaacaat 57

<210> 621
<211> 292
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A8

<400> 621

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ccgccccgcc acatgacgga gtcagagggc gagacggagg ctgcgcgcgc ggccgtgctg 120
acgcgcgcgc tgtcgtctggg gggcgggcggg ctgcgcgggg agctccgccc ggccaacctc 180
ggccaacggg tgctcagcct cttccgcaac gtccgcccgg gctccgacct ctcccacttc 240
cagctgccgg cgacgttcaa cctgcccaag tcgcagctgc agctgtacgg cg 292

<210> 622
<211> 356
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B10

<400> 622

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ctcgggctga gcggcggcgg cggtatcagc gccggggacg cgctgcggcg gacgcgtgcg 120
gagcgcaggg cgacgaaccg gtacatcagc tacgcagcgc tgcgcgcgga ccaggtgccg 180
tgcaacaaac gcggacggtc ctactacacc aactgcgcgg cgcaaacggc cgccaacccc 240
taccgcgcgc gctgctccgc catcacacgc tgcgcccgcg ggatgaactg agcgccatgg 300
cggccgcctg cgggtctgatc tgcctgctgg ctggatgggc atggggcacg cagctg 356

<210> 623
<211> 382
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B11

<400> 623

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ttcaacgggt acatggagct catggaaatg gccagaaaaa ccgggctcaa ggtccaggcc 120
gtcatgtcct tcaaccagtg cggcggcaac gtcggcgatt cagtcacat accacttccg 180
ggatgggtct tggaggagat ggacaaggac caggacctgg cctacaccga ccggagtggc 240
cgccggaact acgagtacgt ctccctgggc tgcgacgcga tgcccgtgct caagggccgc 300
acccccatcc agtgctacgc cgacttcatg cgcgccttcc gcgaccactt cgccaccttc 360
atgggcaaca ccatcgtgga ga 382

<210> 624
 <211> 411
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-B12

<400> 624

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acgggtacat ggagctcatg gagatggcca ggaagaccgg gctcaaggtc caggccgtca 120
tgtccttcca ccagtgcggc ggcaacgtcg gcgattcagt caccatacca cttccgggat 180
gggtcttggg ggagatggac aaggaccagg acctggccta caccgaccgg agtggccgcc 240
ggaactacga gtacgtctcc ctgggctgcg acgcgatgcc cgtgctcaag ggccgcaccc 300
ccatccagtg ctacgccgac ttcattgcgcg cttcccgga ccacttcgcc accttcattg 360
gcaacaccat cgtggagatc caggtcggca tgggccctgc cggcgagctg c 411
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<210> 625
 <211> 278
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B2

<400> 625

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gacgtcattg acatcgaca tgccgcgatc tccattgtgg agagcagtgg cggcggcgcc 120
gacggcagcg cggggagcga cgaggcggca tcgtccatgt tccagagggt ctgggactcc 180
gccatggcct tgggccccct ggacgacgag acggacaccc agtcccagat gagcgaggcg 240
tcgaggtcgc agatgatgat gtccgatgtc caccacca 278
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<210> 626
 <211> 282
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B3

<400> 626

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cggtgggtcgt cggcgttgtc gccaccgtca cccactccgg caagaaggcc ggcgacgact 120
tcaccgtccc gggggaagcc tccattgcca cgtccggcaa gtcggtcgag tccctgtgcg 180
cgcccacgtt gtacaaggag tcgtgtgaga agacgtcttc ccaggccacc aatggcaccg 240
agaaccccaa ggaggtgttc cacagcgttg ccaacgtggc gc 282

<210> 627

<211> 276

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B4

<400> 627

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acggattggt acgcctcttg aaagtctcgc tgggtccgggg tatcaacctt gcctaccgcg 120
acgcaagagg cagcgatccg tatgtcgtcc tacggcttgg caagaagaaa ctgaatacaa 180
gcgtgaagaa gagatccgtg aaccccatat ggcaagagga gctaactctg accgtcacag 240
atcccatcca accactgaat ctggaggtgt tcgaca 276

<210> 628

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B5

<400> 628

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cctaggcagg ccgtcgccgc gccggaggct gcagacggcc ttggccgcga cgggcaagac 180
gccgggagag gcggaggagc aggtccccgc gtgggccaag cccggcgcgg acgagccgcc 240
accctgggag cgcgagggcg gggccgcgcg tggacaggag gcccggcagg 290

<210> 629

<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B6

<400> 629

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acctctctcg acattgatcg agatgctgaa ggataagact gggaaggact acattgatgt 180
agggtcaatc cggctaacgc tttttaacct cttcaaagac gatgccagcc cgaagataaa 240
gaagttcatg aagggtcatgc tgaacaagtt acagcatggg cagcacggag g 291

<210> 630
<211> 307
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B7

<400> 630

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ataaggaagg catatgcaaa agcagccatg gcgaactcgt cgtccggcct tgcagtgaac 120
gatcagtgca aggtgaactt ccgggagctg acgtcgcggc ggagcttctg gttcatcatg 180
tgcaggatcg actacacaga catggagatc aagggtggacc tcctcggcgg accgaaccag 240
tgctacggcc acttcaccga cagcctccc gccaagaat gccgctacac gatctacgac 300
ctcgact 307

<210> 631
<211> 412
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-029-Q1-E1-B9

<400> 631

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gacgcttgcg cagcgcaagc cgaccaaccg gtacatcagc tacgcggcgc tgcgcgcgga 180
ccaggtgccg tgcaacaagc gcggccggtc ctactacacc aactgcgcgg cgagacggc 240
cgccaacccc taccgccgcg gctgctccgc catcacgcgc tgcgcccga gcatgaactg 300
agcgccaagg cggcgccggc cggctctgac tgcttctggc ctggctgggc anggggcacg 360
cagctggcct ggctcgatcg cacaccatgc attgacgtcg tcgccggggg gg 412

<210> 632
<211> 278
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C1

<400> 632

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tccgggcctg gtgggtcctt cgacatcacc aagttgggcg cctccggcaa tggcaagaca 180
gacagcacga aggtctgtgca ggaggcatgg gcatcggcgt gcggcggcac tgggaagcag 240
acaatcctca taccgaaggg tgacttcctt gtcggaca 278

<210> 633
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C10

<400> 633

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aacatggctg cgtgataaca tgcattgacg tgaccaaaca aaggtgacgg cggcaagcaa 120
gcacacgcag ataaaaaaat ggggcgcccg ccctaaaggt tcaaagctaa ggtacccttc 180
aatgcaactt caaaccctt caacagggtc cccaaattcc aattcaaggg cttctgtata 240
aaacattctc aaagggaata cccttggtt taccaaacta aagccccttg aaaaaaacc 300
cccttcccca aacgggataa aaaccaaaga ggcccgaacc tttggccatt caaaaaattt 360
gccacccaa aaaggaaaat ggaaccccc c 391

<210> 634
 <211> 404
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C12

<400> 634

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atggccctcg acgccgtcct ttctccaat tgcccagctt tattgcagat ccagccctct  180
gatcctcgtc ttctttcacc tctccaacat gaaggccaac accaagatca agctggagcc  240
ggtcattggc ccgtcgtcgt cctgccgcg gagcgccagc gagctaccgc acccgccgtc  300
accgttcagc tccaacacgg cgcaccacc cgtctccgtg cccaccacac ctaggttgtc  360
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<210> 635
 <211> 278
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C2

<400> 635

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gaggcccgac cggagtcac acacacacgg tgtctatggc ggccgtaata aggagccgcc  180
gccgcgtgtc cgtttttctt tacgtcgtcc tcgccgcagc tgcagctgca gccgcggcgc  240
aggcatcaa taacgtcacc tccgacgagg agtactgg                               278
  
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<210> 636
 <211> 125
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C3

<400> 636

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tagta 125

<210> 637
<211> 266
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-029-Q1-E1-C4
<400> 637

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agagcaccct ctatgtctgt gcaggaagag caaagttcct caaacacgtc atatgaggaa 120
acggaatctg tgttggtgaa gctgatcgca cgtcagatca cacttttgct gtcattccatt 180
tgggctcaat caacatcccc tgaaaatact cctgtgaact atgaagccat tgctcatact 240
tacagtttgc atctgttggt ctctgg 266

<210> 638
<211> 289
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-029-Q1-E1-C5
<400> 638

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cttcgccgct ggactcgctg gtgtctacct ttccatgccg gactccgact acagcttcct 180
caagttgcca cgtaatctcg aggaactcca aatcctcact ggccaccttg agaactatac 240
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<210> 639
<211> 290
<212> DNA
<213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-C7

<400> 639

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 ggcccagagc acgaggatgg tggcgctggc cctgggtggc ctcttgggtg tggcgacggc 180
 gttggtgccc acggccaccg cgtacggctg ctacgacgac tgctacgagc ggtgcgccaa 240
 cggaagaag gacgaccccg cctgcaccaa gatgtgcaac caggcgtgcg 290

<210> 640
 <211> 269
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-C8

<400> 640

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 tggcggccaa gagttccacc acctccgacg cgtacgcata tccaaggcag cagcaggctc 180
 ccagcagcca gcccatgtct ggtggcgctc ccgacgagct tccaccggtg gccaagacct 240
 ctgccacgcc cgaaccgtac gcatctctg 269

<210> 641
 <211> 279
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D1

<400> 641

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 gcatcatcga catgcagttc cgaagggtta agtgcaagta cgactccaag gtcaccttcc 180
 accttgaaaa ggggtgcggc cccaactacc tggcactgtt ggtcaagtac gtcgacggcg 240
 acggtgacat tgtggcagtg gacgtcaagg agaagggtc 279

<210> 642
 <211> 379
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D11

<400> 642

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ccacgcgtcc gctcacgcgt ccgccacgc gtcgccccac gcgtccgcgt gaagcagctg   60
gacaggaacg ggttccatgg caaccgcgag ttccctcgtgg aggtgctgat gctcagcctc  120
ctgcaccacg cgaacctcgt caagctgctg ggctacagca ccgactccaa ccagcggatc  180
ctggtgtacg agtacatgcc caggggctcg ctggaggacc acctcctgga cctgcccccg  240
agctggaagc ccctgccgtg gcacacgcgg atgcgggtcg cgggtgggcgc ggcgaatggc  300
atcgagtacc tgcaagaggt ggccaaccgc ccggtgatct accgcgacct caatgcgttc  360
aacatcctcc ttgacaagg                                     379
```

<210> 643
 <211> 269
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D12

<400> 643

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gggtcgacgc gctgctgcac gatggctact gccatacgcg gatccgactg gtcgtcggcc   60
gcggcgagct tgtaaacgac cggcttgccg ccgatggctg gatgcttcgc gttcgcgtcg  120
tcgatcgca gttgcgcgcc gttctgcagg tccttgccga tccgcgcgga cgggccggtg  180
agcggcgcg cagaccgat caggatcgtc tgcggcgcg attgcgcgaa cgcgggaacg  240
gatgcggcca gggcggccgc tctagagga                                     269
```

<210> 644
 <211> 279
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D3

<400> 644

ccacgcgtcc ggccgtcctg agcctccgtt tgcgggtgca cagctcctcc aggaccggcc 60
cccgcgcgcg tgccgtacgt gccagggacg acgccgggcg gccgatggag ttcacgtcgt 120
cctacttcca cgccttcggc aaccccgacc tcgcggcggt ggtctccggc gacggcggca 180
gcgcgcaggc ccaccggccg cgccgctcca ccgacggcgc gaaggcggag gacggcagga 240
gccccaccac cacaacggcg aggcgcgcgc cgtccatgt 279

<210> 645
<211> 254
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-D4

<400> 645

ccacgcgtcc ggaaggctcc cacagcgtgg cctcttaacg ccgcacgcct atgtgctccc 60
ggaagctgcc ggccttcctc caaagtgaca agaacgtcac cgtcatggac atcaacatgg 120
aaggctcgcca agggttcagt tcgtggtacc aacaggcgat aaactaaagc gataagggcg 180
tagagatccc atacgacata ttcgtcaccg tctccgttgc tctgcagctc ggatcagtca 240
acctcagcca tatt 254

<210> 646
<211> 291
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-029-Q1-E1-D5

<400> 646

ccacgcgtcc gccacgcgt ccgcggaacg cgtgggctga taattgcagg ttccaattcc 60
aaccgggaat ttttaagaag caataaatta aaaggctttt canaatggag gatgtgagca 120
tgggcatgtg ggtagagcgg ttcaacaaca ccagacttgt taaatatgtc cacagcatca 180
aattttgtca atttgatgc atagatgatt attacactgc aactaccaa tcaccaatgc 240
agatgttgtg tttgtgggac aaactgcagg ctggaaaagc ccaatgctgc a 291

<210> 647

<211> 262
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-D6

 <400> 647

 ggggtcgacnc acgcgtccag cgtccccgaa ccaagaacat gaccataacc ggcgtgctcc 60
 ggccgctect cctccctggg cctccccccg ccgcgataa aaatttcgc cgaaggcgaa 120
 ggccaaggca acggcggttt gaaggcgtt gccgatgccg gcgcggcgga caatccaacc 180
 ccaaccaagg aacgccaacc aaacctggcc gctgggaaaa caacaacccc tcctcaaggc 240
 ggcggttact caacccaac ca 262

<210> 648
 <211> 289
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-D7

 <400> 648

 ggggtcgaccc acgcgtccgc ccacgcgtcc ggggacgcgt gggccgccgt cctaccttca 60
 tatacctagc agtgtctctg catagaaaga taaaaggtan gaggaggcgc agtgcgtggt 120
 gggattattt gtgaggagat attggagtta ttatatatat atatatatag gtagacgata 180
 gatagacagc tagatctata taaccatggt ggatgggttc cgatggatca gaccgggctc 240
 tttcgtcctg tacttgggtc tcttcttctt gtcgcagccc ctgtcggag 289

<210> 649
 <211> 306
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-D8

 <400> 649

 ggtctagaac taccggggtc gacccacgcg tccgcccacg cgtccgcca cgcgtccggt 60
 tcagggcacg cctcaagaac ggcacctctg atctggggtt aacgatccag gccagaagc 120

agtcggagct ccctgagcag gtcctctgct gcgtcagggt gaacaagatc gatttcactg 180
 accaagaagt tccaacaata gtcaccgttg atgacacctg acgcatttga tcaaaatggg 240
 catcagacgt gcgagctatt attaactgct gcaaggctag atccatggga ttcagaggcg 300
 acacag 306

<210> 650
 <211> 279
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-029-Q1-E1-E1
 <400> 650

ccacgcgtcc gcgacaagat ggcgtgcaca aacaatgcga tgagagcctt gttcctcctg 60
 gtctctttct gcatcgtgca tgggtgagaag gaagagtcaa agggcatcga tgcgaaagcg 120
 tccgggcctg gtgggtcctt cgacatcacc aagttgggcg cctccggcaa tggcaagaca 180
 gacagcacga aggctgtgca ggaggcatgg gcatcggcgt gcggcgccac tgggaagcag 240
 acaatcctca taccgaaggg tgacttcctt gtcggacaa 279

<210> 651
 <211> 417
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-E10
 <400> 651

ccacgcgtcc gcgtggnctt gctgagcgtg gccctagtgg gctgctcct ctgaccagct 60
 cgcaattacc gcatccgccc agcagaacag acttccacgt cctcggtagc gtcgacggct 120
 ctagtgactg cagcaggtgc gtgtcagaat gtcgcgtcct ctaatcagat atgaatctgg 180
 ctgagacaga ctccgagtcg ccggcacatg cgccggcgcc agggccgctg tccggttgaa 240
 ctgagaatcg tgcgtccagc catgcaagggt ggtcagaatg tacaactaat tagtggctca 300
 atcatgtgtc aggctaatag tgctcttgcc ataattatat agatatacgc acagtgtgtg 360
 ctaagctacc cacatgcatt ctattgcagg gcgccgcaga tatattaaac aactgtg 417

<210> 652
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-E11

<400> 652

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ccacgcgtcc ggccccctgca cggcgaccaa ccccatcgac cagtgtctggc ggtgccgccc 60
cgactggggcc cgcgaccgca agcgccctggc caggtgcgcc atgggcttcg gccacaggac 120
caccggcgagg ctggcccgga agttctacgt ggtgattgac cccagcgacg acgccgccga 180
cctcgtcacc cccaggaagg gcacgtctcg gcacgccgtg acccgggccc gggcgctgtg 240
gatcaccttc gcgcgcgaca tggatgatga gctctgccag gagctcatcg tgagcagcga 300
caagaccatc gacggggcgcg gagcgcaggt gcacatcggt ggcgcgcaga tcacgtctga 360
gaacgtgcgc aacgtgatcc tccacaacct gcacg                                     395
```

<210> 653
 <211> 297
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-E3

<400> 653

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tctaggactc gcgggtcgac ccacgcgtct aaacagactt gcagtcattt cctccaccac 60
caccaccaag ctcaacaaca gccagctcgc gaaaataatg aagagccgca gcatggcatc 120
atcgcccgcg ctcttgggtg tagccctcgc gctagtggcg gccaccgccc cacaggtagc 180
ggaggcaaag aagaagagag cggcggagag cggcgaggcg gcggaggcga agaagatcca 240
ggacgacttc tgctcgacgc tgtgcgaggg caagaagggg acggacctgg tcgtgtg 297
```

<210> 654
 <211> 279
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-E4

<400> 654

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ccacgcgtcc gctctctcct cggtttcttc tcccaccacc aacccccaga tcgcagcgat 60
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ctccgccgcc gccctctctg ggattccgcg cgacaaagtc aggcgtagag gctccaggag 120
gaggagggag gcgcagcagg gcgggtgggg gagatgttcc tctgggactg gttctacggg 180
gtgctggcct ccctcggcct gtggcagaag gaggccaaga tcctcttctt tggcctcgac 240
aacgccggca agaccacgct gctccacatg ctcaaggac 279

<210> 655
<211> 304
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-029-Q1-E1-E5

<400> 655

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cagaagaaaa gaatagtttag gtcccgggtgg tcgatcgaac gaagctgctg ctgctaccgg 120
ccggccggggc atgacgatga cacggacgat gtgcctaggg ctgctgcttc tactactggc 180
ggcggcgctcg acagcgacgg cgcatttcac ggtcggcgat gtggatgagt acgtgtccaa 240
gcgcacgcag gagtcccgcc acaggaacaa cgggtggcgcg ggcacgatg acctcatctc 300
cagt 304

<210> 656
<211> 278
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-E7

<400> 656

aactctctat actgagtcgt attagagccc cgccccggc ggcttggggc cgcgggcgccc 60
cggctggggg gcgggctgca cagggtgagcg gcctccagcc cctcggcggc tcggcacaga 120
ccggcagccc gtcgcacgag ggcgggcgta ggccctcggc acgagcgagg ctgcacgagc 180
atggccggcg cgggggcacg gccggcgcgg ctccccggcg tccaagcggc cctgcgggcg 240
tgcgggcagc accggcgtgc ggccctcgga ccctttgg 278

<210> 657

<211> 411
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-E9

 <400> 657

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 tggaatgcgc gaggagaagc taggtacggc aaaccagat gtcgacgacg agaagcggag 120
 gcttgggggag ctattgaagg aggctggccg ggtgcgaagc agaaaggcaa agtccttgga 180
 gaatctgctc gagaccaacc catatatcgc caccaagaga aatgcagttg ctgcatgaat 240
 cactgttctg aagatgaaag gcgaggattg ttactaaggt attcaattgg ttcgttcaga 300
 tgggggtaac gggaatattg gtgcttacct attaagaaaa tatgaaatga tcaaataact 360
 gatctcaaat tctttgctgt aaagttttca aatactatta ccgttacatg t 411

<210> 658
 <211> 279
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-F1

 <400> 658

 ccacgcgtcc ggccaggacc aggacgacga tggcccggcc gcgcctcctc ctcaccttcc 60
 tgctcgccgc ggcgcccggtg ctgaccacgg tgcccggcgt cgcgctcgcc aagtcgaagc 120
 tcgccaagaa gagcgacgac gtcgtgaacg ggcccctcct gaccgagaag atccaggcga 180
 agaagacgct gatcgtgggg ccggacgagg agttcaagac cgtgcagtcc gccatcgacg 240
 cgggtgcccgc cggcaacgcc gagtgggtca tcgtccacc 279

<210> 659
 <211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-F10

 <400> 659

 gggtcgaccc acgcgtccgg agaatatcaa gatggaggac tcagccaacc ccattctcat 60

cgacatgaag tactgcccc acaagttgtg tactgccaac ggcgcctcca aggtcaccgt 120
caaggatgtc accttcaaga acatcacccg cacctcctcc accccggagg ccgttagcct 180
gctctgcact gccaaagtcc catgcaccgg cgtcaccatg gatgacgtca acgtcgagta 240
tagcggcacc aacaacaaga ccatggctat atgcacgaac gccaaaggga gcaccaaggg 300
ttgcctcaag gagcttgcac gcttctagac cctccatcga ctgacccatc tctctagtta 360
taatTTTTTct ctcgctcttg cattgcccac tagatgctat c 401

<210> 660
<211> 412
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F11

<400> 660

cgggtcgacc cagcgtccg ctccagtga gtcaacgcc cctccagcac cagtgaagtc 60
accaccacct ccagtgaagt ctctccgcc accagcacca gttagctccc caccaccccc 120
aataaaatct cctcctccac cggcaccagt tagctctcct ccaccagcac cagtgaagcc 180
accatcacta ccaccaccgg cccagtaag ctacctcct ccagttgtca cccctgcccc 240
gccgaagaaa gaagagcagt cattaccacc accagcagaa tcccaacccc caccatcatt 300
caatgacatc atccttccac ctatcatggc caacaagtac gcctctccgc ctccccctca 360
gttccaaggg tattaagcgc cacagagaca tggttgatga agcatgaatg gg 412

<210> 661
<211> 397
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F12

<400> 661

gggtcgaccc acgctccac acacacgtcc gctgcgcggc gccaatccgc tcggctaact 60
caacgacgtg ccgttgcca tctgcgcctc actgctcaaa cacttggaact ctgacaacga 120
ccacgatcag taataccaca tcggcgatca cgatcgatat gtaagagcac gtcgtcaacg 180
acggagcgca gtcgtcgcag actggctggc actaaaccag atctcctctt cagtgtaatg 240

acacatctgt aactgagata ggaaaggaca acagcaatgt aactgcgtgg ctgtatcaaa 300
 ttctgagtgc tggaatcatg ctattgtcac ccagtgttcg tttatcata caagttgcag 360
 cgcagctcaa gacggctaag gacctgttcg tttgtgt 397

<210> 662
 <211> 277
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-029-Q1-E1-F2
 <400> 662

ccacgcgtcc ggaagattcc actaataggt atgcaacttt ttacatcgtt tcatatctaa 60
 taatccaaat ttcagtagtt atatatagtt atttactgca agaagttaat ttttagtttc 120
 agttactgga acttggaaga actaaaactt tttacacatg tatattattc ctgcgcattg 180
 agactaaaat gaaaaaaga acaatcggcc cataatttat agctttcaat atagaactac 240
 atgatttggt gcaaaatatg tgattataat ttttgtt 277

<210> 663
 <211> 278
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-029-Q1-E1-F4
 <400> 663

ccacgcgtcc ggcggccgtg gccgcgtgc tgctggtcgc agcgggtgtcg cctgccgcgc 60
 gcgcggcggc ggtggcgggt gcgggagggg cgccgtcggg gccggcgggt ccgctggaca 120
 tcgcgcagct gggcgccaag ggcgacggca agtcggacag caccgccgatg atcctcaagg 180
 cgtggaagaa cgcgtgcgag gcgacggggg tacagaagat cgtcatcccg ccgggcaact 240
 acctgacggg cgggctggag ctgaagggcc cctgcaag 278

<210> 664
 <211> 290
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-029-Q1-E1-F6

<400> 664

gggtcgaccc acgcgtccgc cacgcgtccg cgcagccggt gacaaccgaa cgcgagctac 60
ccttcggcca cgacgccgtc acgttttctt tcttggtggc gtgcgtggcc gccaccgtcg 120
cgctcgcgtc gtccatgtgc tcggcgtgcg accgcaagcc aaaggcggcc accaacgcgg 180
acccggctgg gacggcctcc tccatctccg gtggtagcgg cagccaggag gctggcgcgg 240
aggaggcagc ggtagaggag gaggtggtga ggctgtcgcc ggagctggcg 290

<210> 665

<211> 290

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-029-Q1-E1-F8

<400> 665

gggtcgaccc acgcgtctac gatacctggc tcaangcgt catgacgttc atggacacct 60
gcgtcgacgg ctctcgtcac gagaagctca aggccgacat gcactccgtg ctgcgcaacg 120
ccaccgagct cagcagcaac gcgctggcca tcaccaacag cctcggcggg atctgaaga 180
agatggacct cggcatgttc agcaaggact cgcgccgccg actgctgtcg tcggagcagg 240
atgagaaggg ctggcccgtg tggatgcggt cgcgggagag gaagctgctg 290

<210> 666

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F9

<400> 666

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ctggcaccga tcagctcacc gccatcagag cccaagtcac cgtcgtcacc tccaatggta 120
gagaaaactt ctccaccacc ggcaacggtt agtcaccac cacctacgcc taagtcgtca 180
cctccacctg ctctgtgag ctccaccact ccagtgggtga agtcttctcc accaccggca 240
ccagtcagct caccaccacc gacacctaag ccattacctc cacctgctcc tgtgagctca 300
ccacctccgg tggatgaagtc ttctccaccg ccgacaccag tcagctcacc accaccgaca 360

cctaagccat tgctccacc tgctcctgtg agtcaccac ct

402

<210> 667
<211> 280
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G1

<400> 667

ccacgcgtcc ggcgcgccga cgaccgcggg cggcgcggcg ggcgactacg cgcggcacga 60
gatggacgtg gtgaaggaca acgacatgtg gcagtgcctg aacgagtgcg ccggggagat 120
cgaggaggcg ctggaccacc tggacgacac cgagggcggc ctgcacgacg gcaagctcca 180
cgacgtgaag ctgttcctgg acacggcgga ggaggacacg tggtcctgcg acgtctgctg 240
caagcacgcc ccattccacg ccgtcaaaac cacgctgctc 280

<210> 668
<211> 398
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G10

<400> 668

gggtcgaccc acgcgtccgc acgaggcacg accacgttat gctgttcggg gccagcgacg 60
ccgcgtccaa ggacagggag atgcaggtca ccgtcgctt caaccacttc ggcaaggggc 120
tggtgcagcg gatgccgcgc tgccgtcacg gcttcttcca cgtggtgaac aacgactaca 180
cgcactggct catgtacgcc atcggcgga gccggaaccc caccatcatc agccagggca 240
accgcttccg cgccgtcgac gacagcaggt tcaaggaggt gaccaagcgg gagtacacgc 300
agtacagcga gtacaagaac tgggtgtgga agtcgcagga cgacctgttc ctcaacggcg 360
ccttcttcaa ccagtccggc ggccagaacg agcgcaag 398

<210> 669
<211> 354
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G11

<400> 669

acaagtctct acagtgagtc gtattagtgt ctgctgttcg gggacatcga cgtaacgtct 60
aatgacaggg acatgcatgt cagtctcgca ttcagcgact ttgagacggg gctgggtgcag 120
cgggcgctgc gcagccgtga gcgcttcacg gacgtggtga acagcgacta cacgcactgg 180
ctcaggtacg caataggagg taaacggcat cctaccatca tcagcgacgg caaccgcgtc 240
cgcgtcgtca tcgacaatac gtgtaatgac gtgaggaagc tggagtacac gcagtatagc 300
gagtatccga gctgggtgtg gaagtctcag gacgacctgt tcctcaacgg cgcc 354

<210> 670

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G12

<400> 670

gggtcgagcc acgcgtccac ggacacgtgg gtcaagatcg agaacgtcga gaacctgtcc 60
atcaacggcc acggcaccat cgacgggcag ggagccctgg tgtggagcaa gaaccagtgc 120
cagcattctt acaattgcaa gatcctcccg aatagcttgg tgctggattt tgtgacgaac 180
gtccagatcc gcggcatcac gctgctcaac agcaagttct tccacctcaa catcttcgag 240
tgcaagaacg tgctgatcga caaagtgacg gtcaaggccc ccggcgacag cccaacacg 300
gacggcatcc acatcggcga ctccagcaac gtgaccatca gcagcaccac catcggcgtc 360
ggcgacgact gcatctccat cggccccggg agc 393

<210> 671

<211> 279

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G3

<400> 671

ccacgcgtcc gctcgcttgt cctcatggcc ttgatgatca catggcacta cgtccacgtg 60
atgaagtact ggtacgagct ggaccacgtc gtgccagcca acgaagtgac aacgctgctt 120
gagaagcatg aggtgcggcg gatccccggg gtgggcctcc tttactcgga cctgggtccaa 180

ggcatcacc cctgtgttcc acgtctggtg cagaggatac cctccgtgca cgcggtcttc 240
ctgttcatgt ccatcaagca cctgccgatc ccacacgtg 279

<210> 672
<211> 278
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G4

<400> 672

ccacgcgtcc gaccaccttt accaccgaag agagaaacgc gagcaaccag cgatcgcccc 60
atggccgcca tggctcgttc cgtctccctc gtcgtggcgc ccctgctect cctctccctc 120
ctcgtctccg ccgcggccag cgcgcggacc gtggggcaca ccgtgcagga cgcgtgcagc 180
aagaccaggt tccccaaagt ctgcgtggac agcctcgccg ccaagccgga gagccagaag 240
gcgacgccgc gcaagctggc ggagctgttc gtgaacat 278

<210> 673
<211> 271
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G5

<400> 673

atagtgagtc gtataaggcg tcatgacgtt catggacacc tgcgtcgacg gcttcgtcga 60
cgagaagctc aaggccgaca tgcactccgt gctgcgcaac gccaccgggc tcagcagcaa 120
cgcgctgggc atcagcaaca gcctcggcgg gatcctgaag aagatggacc tcggcatggt 180
cagcaaggac tcgcgccgcc gactgctgtc gtcggagcag gatgagaatg gctggccccgt 240
gtggattcag tcgccggaga tgaagctgct g 271

<210> 674
<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G7

<400> 674

gggtcgaccc acgcctctac acagcaccat gttcatccac atgaacatgt acaagtgcaa 60
gaacatgctg atcaaggacg tgaccgtgac ggcgcccggg gacagcccca acacggatgg 120
catccacatg ggcgactcat ccgggatcac catcaccaac accgtcattg gcgtcggcga 180
cgactgcata tccatcggcc ctgggacctc caacgtgaac atcactggcg tgacctgcgg 240
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<210> 675
<211> 372
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G9

<400> 675

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catccacatg gcggacgacg ccgtcgccgg cggagcggcc gtctgctgcg cagggccggc 120
gccggcctcg ctgtcttcta gcaggaagca gcagcagcag cccgacgacg ccggctgcgg 180
cagcagcgac gaccactacc agcacgacgt gatcatgctg aggcggacga ggagcgggcg 240
ggcgttcccc cgcgcgatct ccgtgatcgg caagggcggg cggccgtggc tctgcctgcg 300
ggcgcaccgc gaggtggac gcctcgtgct gcggcagatg cgctgccgt cgcaggagct 360
gctgcagccc tg 372

<210> 676
<211> 292
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H1

<400> 676

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gcagacaatc ctcatacca aggggtgactt ccttgtcgga caactcaact tcacaggccc 120
ttgcaagggc gacgtgacca tccagggtga tggcaatctg ctggcgacca cggacctaag 180
ccagtacaag gaccatggta attggatcga gattctacgt gtggataacc tggatcac 240
cggcaagggg aaccttgacg ggcagggccc agccgtgtgg agcaagaact cc 292

<210> 677
 <211> 416
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-C6

<400> 677

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cgacatccac agggggggagg ggaaaacacg tgcattcacc cggcggcaat aatggcctcg  120
gttcgggctc cggcgacgac gaccgccgcc gtaatcctat gcctatgcgt cgtcctctcc  180
tgtgccgcgg ctgacgaccc caacctcccc gactacgtca tccagggccg cgtgtactgc  240
gacacctgcc gcgccggggt cgtgaccaac gtcaccgagt acatcgcggg cgccaagggtg  300
aggctggagt gcaggcactt cggcaccggc aagctcgagc gcgccatcga cggggtcacc  360
gacgcgaccg gcacctacac gatcgagctc aaggacagcc acgaggagga catctg   416
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<210> 678
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-C7

<400> 678

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gacgcggcca tcgccgagta cagcagccag gcggacgcca ccaccatccc gggccactac  180
gtcgtgtact gggagctcat ggtgaggagg ggcggggcgt cgcccagcgc cgccgtcttc  240
gagcgtgct gcctggagat ggaggaggcc ctgaacgcgg tgtacaggca gggccgcaac  300
ggggacgcca tcaggccgct ggagatccgg gtggtgcgcg gcggcacggt cgaggagggtg  360
atggactacg ccatctcgcg cggcgctct atcaaccag   399
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<210> 679
 <211> 410
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-C8

<400> 679

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cggtgatcta ccgcgacctc aaggcggtcca acatcctcct tgacagggaa ttcaacgccca 120
agctctccga cttcggggtc gccaaagtgg gcccctatggg cgaccagagc cacgtcagca 180
ccagggtcat gggcacgtac ggctactgcy ccccgagta cgccatgacc ggcaagtca 240
ccaagatgtc ggacatctac agcttcggcg tcgtgctgct cgagctcatc accggccgcc 300
gcgccatcga cgtcacgagg ccgtccgagg agcaggctcct cgttcactgg gcaacgcctc 360
tgctgagaga caggcggagg ttcatgaagc tggccgaccc gttgctgggc 410

<210> 680

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D1

<400> 680

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cccagcggat gctagcctga tcgggtcccc acggtcgatg ggttcgcccg ggtccgcca 180
tggcagacgc ggcgagtacg tgaggatccc tgaggagggtg gaggtggcgt ccaaggggga 240
ggcagatgcc gcggcgccca tcaaggcggc cgtggcagcg gagtgcccgga gggtgctgcy 300
gtgccgcgcg atccggtggt gggccaaggc cgcctgtgctt gggatcttcc ttgcaggggc 360
cggagctgct gccgtggtct tcctcgcccc gctcgttatt aagaagggtg ttgcacctat 420
tctttactgg ga 432

<210> 681

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D10

<400> 681

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 aagagccagc cagagaaaact aataaaaactc tcaccgcccgc catccgagag aacaagccaa 120
 ccgaccccgt cccaaggca atccgtcgcc gacgtaccac cgccaccgca ggagcgagat 180
 ggagatgaag aggatcctct tcgccgtcct cgtcgtcatc gccgcctcgg ccaccgcagt 240
 gctggcctcc accgaggccg ccgccgcggg cgcaccaact gcctccgagt cgtccgccga 300
 ggctcccgtt ggcgtggcg ctggcgctgc cgtcggcgcc gccgccgcgg ggccctccgc 360
 cagcagcggc gcgcccgcgc tcgccgcgc gccgcgcgc ctcctcttct ccctcctcgc 420
 ctactacctc cactaagcgt gtgc 444

<210> 682
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D11

<400> 682

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 gctggacgcg gacggcgggt gcgccgagg gctcaacaag ctggctgaag ccttcgacgt 180
 cgcgctgggg ccgtcctcgc ccggcctcgc cgacaagctg ccggggctga cctactcgtc 240
 ggccaactcc ttccgcctga cgcaggacgc cttcgcggac ccgaaggcgt cagggtacag 300
 cgacgtggcc agcgctgct gcgggagcgg gcggctgctg gcggaggcgg actgcctgcc 360
 caactccacc gtgtgcagcg accacgacag ccacgtgttc tgggaacgct a 411

<210> 683
 <211> 285
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D12

<400> 683

ctactagta gtcgcgtaga cggtgcaact ccctatagtg agtcgtatta ctccgtcagg 60
 caccacggct gggcagggca gctgctccac gtcacccgtg aggttcacag tgtggctcct 120

ctggtgactc gcggttgcgt gggggtcgga gccatcatcg acgctgaccg cagatgccaa 180
atcttgtgct aacaccatga acgtgacaac gtgggcgctc cactcggatc atcacctctc 240
ggctgcggtg gcacacctac gctctggcga ttgagggctc gagac 285

<210> 684
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D2

<400> 684

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ccagctgagg ccgccgtctc cacacccaag gttgcgccc aggccactcc aatctccgtt 180
gaggttgcgg ctgatgaaca ggtagctgag aaggtggtag tggaggagcc ggctgcggcg 240
gccgacgttg atcatcacia ggctaataag gtggtcgctc cacaggcgga cgtcgccgag 300
cccgatcaca aggatgagga agccgtggag aacaccgtcg tcgacgacga gaatccagcg 360
gcagccgcca atgcagagga aaaggtcgcc accgccgccg agaccacgac g 411

<210> 685
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D3

<400> 685

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taagagccag ccagagaaac taataaaact ctgccgccg ccatccgagc gaacaagcca 120
accgaccccg tcccaaggc aatccgccg cgacgtacca ccaccacgc aggagcgaga 180
tggagatgaa gaggatcctc ttgccgtcc tcgtcgtcat cgccgcctcg gccaccgcag 240
tgctggcctc caccgaggcc gccgccgcg gcgcccacac tgcttccgag tcgtccgccg 300
aggctccgcg tggcgctggc gctggcgctg ccgctggcgc cgccgccgcg gggccctccg 360
ccagcagcgg cgcgcccgcc ctgccgccg cgccgccgc gctcctcttc tccctcctcg 420

cctactaact ccactaagcg tgtgcgtgc

449

<210> 686

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-022-Q1-E1-D4

<400> 686

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tttgggctct tctccgggga gttcctccgc cggcacgggc tgcacctcct gggcacgtcc 180

tcgacgtggt tcctgctgga catcgcttc tactcgaga acctgttcca gaaggacatc 240

ttcagcgagg tgggggtgat cccaaggcg gcgacgatga acgcgctgga ggagctgttc 300

agcatcgcg cggcgcgatc cctgatcgcg ctgtgaggca cggtgcccg ctactggttc 360

acggtggcgc tgatcgacgt gttggggcgg ttcgcatcc angtgacggg gttcctgatg 420

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<210> 687

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D5

<400> 687

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gattggtagg cctcttgaaa gttcgctgg tccggggat caaccttgcc taccgcgacg 120

caagaggcag cgatccgtat gtcgtcctac ggcttgcaa gaagaaactg aagacaagcg 180

tgaagaagag atccgtgaac cccatatggc aagaggagct aactctgacc gtcacagatc 240

ccagccaacc actgaagctg gaggtgttcg acaaggacac cttcagcaga gacgacccca 300

tgggagacgc ggaggtggac gtggcgccac taatggaggc ggtgagcatg aaccgcggg 360

aggagagtct gaggaacggc gccatcatca ggtccgagcg gccgagcgcc aggaactgcc 420

<210> 688
 <211> 403
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D6

<400> 688

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acttcacagg cccttgcaag ggcgacgtga ccatccacgt ggatggcaat ctgctggcga 120
ccacggacct aaccagtag aaggaccatg gtaattggat cgagattcta cgtgtggata 180
acctggtcat caccggcaac ggaaaccttg acgggcaggg cccagccgtg tggagcaaga 240
actcctgcat caagaagtac gactgcaaga tccttcccaa ctgctgggtg atggacttcg 300
tgaacaacgg ggaggtgtcc ggggtcacgc tgctcaactc caagttcttc cacatgaaca 360
tgtaccggtg caaggacatg ctgatcaacg acctgaccgt gac 403
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<210> 689
 <211> 423
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-D7

<400> 689

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gatggagtgc acgtcgtcct acttccacgc cttcggcaac cccgacctcg cggcgggtgt 180
ctccggcgac ggcggcagcg cgcaggccca cgggccgcgc cgtccaccg acggcgcgaa 240
ggcggaggac ggcaggagcc ccaccaccac aacggcgagg cgcgcgccgt ccatgttctg 300
cgtccccgac acggaggcgg aggagcccaa cggcttcttg gacgagtga ccctctgccg 360
caaggcgctc tgcggcgaca tcttcatgta cagatgggac acgccattct gcagcgacga 420
ttg 423
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<210> 690

<211> 406
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-D8

 <400> 690

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 agccctcgcg ctagtggcgg ccaccgcccc acaggtagcg gaggcaaaga agaagagagc 180
 ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag gacgacttct gctcgacgct 240
 gtgcgagggc aagaagggga cggacctgtt cgtgtgcaag gagtctcgcg cgctctccca 300
 gcagtccaac ctggtgctgt acggcaggat ccagtgcagg ggcaagtgca ccgagcagaa 360
 gggcatcacg gcgccggcca tgaaggtctg ccaggaggag tgcgac 406

<210> 691
 <211> 406
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-D9

 <400> 691

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 gtgatagaga tgctggccga caagcccacg tactccacgt tcctgaagct cctgcaggac 180
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 aaacttgcca agcctctggc gtcgctgccc gccgataagg tgcggccggc ggtggagaac 300
 cagtccttc tcagttactt tcgaccatc aagctggacg agatgaagac acgcaaacgc 360
 atcctcccaa cgctgctctc cgtcacgaca agaaactcgg cgtcct 406

<210> 692
 <211> 420
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-E1

<400> 692

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cttggtgagc ggcacatggt gcggtcctcc caaagtctcc ccaggcaaga acatcacggt 180
cacctatggc aaggactggc tggacgctaa agcgacatgg tatggcaagc cgacaggtgc 240
cggtcacgat tacaacggtg gaggatgcgg gtacaatgac gtgaacaagc ccaccttcaa 300
tatcatgggc acatgcggca acatccccat cttcaaagat ggactggggt gtgggtcctg 360
cttcgagatc aagtgcgata accctgtgga gtgctccggc aagctcgtgg tgggtgcacat 420

<210> 693

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E10

<400> 693

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gtatgcgcat gtgaccgga tgctcggcaa cgggcggtgc gaggccacct gcgtggacgg 180
cacgcgtcgc ctctgccata tccggggcaa gatgcacaag aaggtgtgga tcgcggccgg 240
ggacategtc ctctcggcc tccgcgacta ccaggacgac aaggccgacg tcctcctcaa 300
gtacatgaac gacgaggcgc gcctgctcaa ggcctacggg gagcttcccg agacgctcag 360
gctcaacgat ggcgtcgacg tcgatgggcc cgaggacggc gaggagaacg gcgact 416

<210> 694

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E11

<400> 694

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catggtcgtg ggcccgctcc ttgcggcgct cgtcgccggc gggtcgtgcg ggcccccgaa 120

ggtgccaccc ggccccaaca tcaccaccaa ctacaacggc aagtgggtca ccgctagggc 180
 cacctggtac ggtcagccca acggtgccgg cgctcctgac aacggcggtg cgtgcgggat 240
 caagaacgtg aacctgccac cctacagcgg catgacggcg tgcggcaacg tccccatctt 300
 caaggacggc aagggctgcg gctcatgcta cgaggtgaga tgcaaggaaa aacctgagtg 360
 ctcgggcaat ccagtcacgg tgtacatcac tgacatgaac tacgagccta tcg 413

<210> 695
 <211> 440
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-022-Q1-E1-E12

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 caccacaagc aactcacct cctccatcat ctctaataag ctcacctcct cctccgatgc 180
 aatccccctc accgctgct ccagtcagct caccaccagt acctataaaa tcaccaccac 240
 cggttccagt aagctcacca cctcctcttg gcgcaatccc ctccaccacc tgctccagtc 300
 agctcactac caccacctgt aaaatcacct cctccagcgg ctccagttag ctcaccatcg 360
 cctcctgtga aatactcttc accacctact ccagtcaact cactgccacc atctgtaaaa 420
 ttacctctc cactagctcc 440

<210> 696
 <211> 432
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E2

<400> 696
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 tgatccgacc tcccctaagc catcgatgag tagagaaaaa cagtgaacgc cacctctgta 180
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acggacaggt gctcggcgtg ctgcaacggc ttccgatttg cccggctaga tggaagacgg 360
ctggggagca tcttctctgg ggaacaccgc gtgtcatggg tgccttgccg aagttcaagg 420
acggcgtgat tg 432

<210> 697
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E3

<400> 697

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aactacgcgt cgttgtggtc gcccaagcgc ctcatgcagc gcgctgcccg cgctttccgc 180
cgcagcaggt cgcgcgcccg cgtcaggacg gtcaaggacc tcgccgagga acgggcctca 240
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gcaggtgcca gtgccaagac ctccagcagc aacgatgcc gcgacggcgc catgggcagc 360
gtgcaggacg agccgcggca gcagcgccac gatgactatc aacccgagat cgggtcccag 420
aa 422

<210> 698
<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E4

<400> 698

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tcaaccatgg cgaactcggc gtcggggatg gccgtgagcg acgagtgcaa gctcaagttc 180
caggagctca agtcgaagcg aagcttccgg ttcatcacgt tcaagatcaa cgagcagacg 240
cagcaggtgg tgggtggacag gctggggcag cggggcgaca cctacgacga cttcaccggc 300

tccatgcccc agagcgagtg ccgctacgcc gtcttcgact tcgacttcac caccgacgag 360
aactgccaga agagcaagat cttgttcac tcttggtccc cggacacctc gagggtcagg 420
agcaagatgc tgtacgccag etc 443

<210> 699

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E5

<400> 699

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gcgggttgga ggccggtggc ggaggcggcg gcggcggtta ctccaccccg agcgaggcag 180
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cccctagcga ggcagcgcca tccacgcctg ccgctgagga gacgacgacg actccttcgt 300
caggcggcgg gggttacggc ggtgcaaccg gcaaggcttc ctcaggcggc ggccggctgg 360
accccgacgg cgaccagag gttgggctg 389

<210> 700

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E6

<400> 700

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cctccgtgat ggccgacgtc gacgtggacg ccaacaacga ggccgagcaa aggacgcgct 180
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ggcgggcgcc gtccccggcg tcccgtccc ttcggatgct ccagagcgtg tgccggtcgc 360
tcccgtgct gaaccgcgg tcggggcgcc cgatgatgca tgccggggcg tgccg 415

<210> 701
 <211> 389
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-E7

 <400> 701

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aagagtccac ataaggaag gattgaaaag aagcggagga tcctcacgaa caggtacgag  120
ctcggggcgca ggcgcgggca aggcaccttc gcgaaggtgt actacggacg gaacctcgca  180
tccggcgaga gcgtggcaat caatgtcagc cacaaggaga aggtgatgcy cttccgcatg  240
atcgatcaga tgaagcgca gatctccgtc atggcctcg tcagccacc cagcgtcgtg  300
cagctgcacg atgtgatggc cagcaggaac acgatatact tcgccatgga gtacgtctgg  360
ggcggcgagc tcttcggacg ggtcgcccg                                     389
  
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<210> 702
 <211> 398
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-E8

 <400> 702

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catcatccat gggcgctgc gcagccaaac acaccacgca tcatgagcaa gacgtacgag  120
atgccgccgt ctctacacc aaggttgctc ccgaagcgac tccaatctcc gttaatgttg  180
ctcgctgaag aacatgtacc tgagagtgtg ctagtggaag aacctgatgc ggctgccgat  240
gttgaacatc ataaagctaa agatgtggtc gtcacacatg ctgccgtagc cgagcctcat  300
cactgaag aagatgccgt ggagaagaac gtcgacaaag atgacaagcc agtagctccc  360
gcgaatgcag atcatcacgt cgctagcgcc gccgagac                                     398
  
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<210> 703
 <211> 407
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-E9

<400> 703

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ggattgaaca tcctcacgtg tcacctcttc acgaggaact tatccccact tcaattcata 120
cccctggatc accctattct tgtgatgtcc cgatgggtga agaggccata gacgccatct 180
gcaagagcca cggaacacca ccagatgaga agattgccat caccaaagct attataaatg 240
tatcgaatgg atccaagccc ccaactcttg ctggcatcat agcacttggt atgagcatcg 300
caacgatggt ccgtctgacc cgcagcatga tgccctgggaa ggttctcggg gctgccatag 360
gtggagctac cctctcagaa ggtaaataca aagtacaaga gcgccag 407

<210> 704

<211> 416

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-022-Q1-E1-F1

<400> 704

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cagctgacgg tggcagcgt gatccccctt ttccagcagc tgacgggcat caacgtgatc 120
atgttctacg cgccggtgct gttcctgacc atcggtctcg gcgacgacgc gtcgctgatg 180
gcggccgtca tcacggggct ggtcaacatg ttcgccaccg tgggtgtccat cgtgtgcgtg 240
gaccgcctgg gccggcgcg cgtgttctct cagggcggtg cgcagatgtt cgtctcccag 300
atcgtgggtg gcacgctgat cgcgctccag ttcggcaccg ccggcgtggg cgagatgtcn 360
cgctccaacg cctggctgct ggtgctcttc atctgcctct acgtcgccgg gttegc 416

<210> 705

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F10

<400> 705

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 ttctagcgct cttctgcacc gtgcatgggtg agaaggcaaa gtcaaaggac aacgattcaa 120
 aagcgctccgg gcccggtggg tccttcgaca tcaccaagtt gggcgctctt ggcaatggca 180
 agacggatag cacgaaggct gtgcaggagg cgtgggcatc ggcgtgcggc ggcaccggga 240
 agcagacgat cctcatcccc aagggcgact tcctcgtcgg accactcaac ttcacaggcc 300
 catgcaaggg cgacgtgacc atccagggtg atggcaatct gctggcgacc acggacctaa 360
 gccagtacaa ggatcatggt aattggatcg agattctacg cgtggacaac 410

<210> 706
 <211> 410
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F11

<400> 706

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 cggtggatca agtgcacac acctttaggg agggcccttg gacagcagtt tgtgctgcaa 180
 attctatata gctctgtcgc agcatggcct cgggtgggctt ggcacgctct tctttgggat 240
 ttcagaatgg cacaagttct agcagtgacc cagatcgtct tcccaacgag ttgggcagta 300
 tgagcataac ggacgacaag gacgttgaag atattgtagt caatggcaat ggggcggagc 360
 ctggtcatat catagtgacc agcattgatg ggagaaatgg gcaggcaaag 410

<210> 707
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F2

<400> 707

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 ggatgaagga cagcgacaaa ccgcttaagg gaccctcac cgtccgcctc actaccgagg 180

gaggcaccaa gtccgtctac gacgatgtca tccctgccaa ctggaatgcc aacaccgcct 240
acaccgcaa ataattaact ttagtgctga caatacttta agccgaccta tgctacctat 300
actagattgg gttggatccc aagcaatgca ttacacatgc atgcattgga ccgtgatatc 360
tatttgctac cactacccta ttacgacagt gatgctggcg ccaacaatga tgggtgcatc 420
ctcct 425

<210> 708
<211> 439
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F3

<400> 708

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atggctcggc gaccggacga cctagcgttg gccgccatca cttttgcgat cgtcgccttg 120
tgcgcgcggt atgcatcggc cgtgggcact acaccccagt caaccttcag ctacaaggag 180
ggtgacccta ccgggcctac aaaatgggcc acattgcaga aggactggga tgtctgtgac 240
agcggcaccg agcagtcctc gatcgacgtc gccaaaggtg aggtctctga ggatttagac 300
ccgctgcagc agacctacga gcctggcgac gccgtcatgc acaaccggct ccacgatttc 360
atgctgaact ggacaggagg gaacggcggc ctgacaatcg aagggaagaa gtacaagctg 420
aagcaggtgc actggcacg 439

<210> 709
<211> 440
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F4

<400> 709

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accgttcagt ctcaacttga caattttcgt agagttgcaa tagatgaaaa ttttgatgac 120
catgcaataa gacaatggga tcaacgaaat aggtcttcag agtcccttcc acataatgtg 180
tctgaagatg ctctttcttc ttttgatact tacgatgttg tttatggaga acaagatggt 240

ctaggcccaa aagcatttga tgtacatcca atatctatct tgcacaaacc aagaaaccat 300
 atttctgata acattcagat atatcaacca aataaggagg cttcctcaga ggtctctgag 360
 gagcattgca aggaagtcca gtgcatcgaa acaaatgagc ttaagaggag tccattattc 420
 tttcctgttg atcgatatca 440

<210> 710

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F5

<400> 710

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 agcacgtaca acctcctgga cacggtgagc cggcacacga tccaggtgta ccctagggtcg 120
 tggacggcgg tgatgatgac gttcgacaac gcgggcatgt ggagcatccg gtccaacatc 180
 tgggagaggc agtacctcgg cgagcagctg tacgtgagcg tcattctcgcc ggagcgggtcg 240
 ctcaggggagc agtacaacat gccggagact agcctccgct gcggcaaggt cgctgggactg 300
 ccaatgccgc cgtcctacct ctccgtctag agcatgcacg catctcgctc gggtttccct 360
 tccttccatc acgtgcgcac ggtgctgtat acacaat 397

<210> 711

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F6

<400> 711

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 gctcatcttt gctgggaagc agcttgagga cgggcgcacg cttgccgact acaacatcca 180
 gaaggagagc accctccact tgggtgctgcg cctcagggga ggcattgcaga tcttcgtgaa 240
 gaccctgacc ggcaagacta tcaccctcga ggtggagtct tcagacacca tcgacaacgt 300
 caaggccaag atccaggaca aggagggcatt tccccagac cagcagcggc tcattctttgc 360

tggaagcag cttgaggacg ggcgcacgct tgccgactac aacatccag

409

<210> 712

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F7

<400> 712

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ggactgcgcc attgtttccg tgaacaacat ggaggagatc atgacettgc ctgtggcacc 180

acctcaactt gacattcacg acaatccaat caagggtgcc ccatggaagg gaggtttctc 240

cttcaagaca tgtaccatca ccggggaagg gcaacatata ttcttcggaa ggatgggcac 300

gccttccatc tactctaca cccagattgc taaggagggt gtgcccataa tctacgacaa 360

agggaacatc ttcatgcccc gtaatatgac tggtagacgc tgtgccactt 410

<210> 713

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F8

<400> 713

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tcaccttcgc atttcagctg agctgcctga ccgctaacgg gccagtgata ctgccagcgg 120

aggcgatcac gattgtggtg gtgctggggc tcaccttcta caccttctgg tgctgccaat 180

aagggtacg agttcgaatt cctggggccg ttcttggtgt ctgtctgcct catccacatg 240

ctcttctagc accagcgtat catctgcgtg ctgggcaaga cccggaccat ggtgtaacgc 300

tgcacgctc agctcgtctt ctccggtttc atgatctatc atcaccgaca accgcac 358

<210> 714

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F9

<400> 714

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cgacatcacc aagttgggcg cctccggcaa tggcaagacg gatagcacga aggctgtgca 120
ggaggcgtgg gcatcagcgt gcggcggcac cggaagcag acgatcctca tccccaaggg 180
cgacttcttc gtcggaccac tcaacttcac agggccatgc aagggcgacg tgaccatcca 240
ggtgaatggc aatctgctgg cgaccacgga cctaagccag tacaaggatc atggtaattg 300
gatcgagatt ctacgcgtgg acaaccttgt catcaccggc aagggaaagc tcgacgggca 360
ggggccagcc gtgtggagca agaactcctg cgtcaagaag tacgactgca aga 413

<210> 715

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G1

<400> 715

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agcaacaagg tcaattgatc tagtttctact cggacacgac taattcatcg ccatcgcaac 120
cacttgtacg ggtattatgt atggaagaag agcgtgaata aaacactgac gaggatcagc 180
tcgagtgctt cactgaacaa gccactactt gagcccagtg cctgagcctt gtcttcacaa 240
gcagaggggtt atctcctggg ttgcaaactt tccatgactc caaggcgta ctagagtgcg 300
caccagggct acctgggctg ggcgtgccgc agaggttggg cgacgacttg gtggccgaca 360
gaga 364

<210> 716

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G10

<400> 716

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cgctgccgcc gcgccccaac aagccgtcgg ccgtgccgag gttcggcgtg tgggacgagc 120
agaacgccgc gatggcggcg cagggattca cgggtgcagtt cgagaaggtg aagcgccacc 180
gggaggaggc caggaccgcc cccgcgccgc ccgtgcagcc gccgaagctg ctgtcgtcgc 240
ccgaccacgc agcgcccgcca cgcgcgcggc gacacgggaa ggggaaggcc aagaggtcct 300
tcatgtccag gatctacagg tgcctgttcc caagggtcag agagtgagtg atccgacgat 360
ggttatacac aaccgctcag ccgtatacgg tgtactacgt gttcttcgac agagac 416

<210> 717
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G11

<400> 717

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ttcatcttcg gcaactcggc ggcgctgttc cagaactgcc tcatgacggt gcgcaagccc 120
ggggacagcc agtccaacat ggtgacggcg catgggcgga cggaccccaa catgcccacg 180
ggcatcgtgc tccagggctg ccgcacgtg ccggagcagg cgctcttccc cgaccgcctc 240
cagatcgcca cctacctcgg ccggccgtgg aaggagtacg cgaggacggt ggtgatggag 300
agcaccatcg gcgacctcat caggccggaa ggggtggcgg agtggatggg cgacctcggc 360
ctcaagacgc tctactacgc cgagtacgcc aacaccggcc cgggcgccgg caccagcaag 420

<210> 718
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G12

<400> 718

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ctcgcctgcc gccactgcca accgccagaa cgcaggcggg gctacattcg aaccaattcg 120
acacctccag cagcggcggg ctgctggatc agtcgatgct gatcggcgac gaacacctgc 180
tgcggcccaa cccgagtatg gtcaaggtct cctccatgcc cgcgctctcc taccgtgagc 240

cggatgggtc caggatgctg ccagcccatg ggcgcgggag cgacggcgac gtctcctcgc 300
 tggggcactg ccttccggga caggacctcc accgtggacg aacacgaacg tgcgtacacg 360
 cggcacaaac acgatgatca tcgtctcacc atgtggttgc atgcatcggg aaac 414

<210> 719

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G2

<400> 719

cggctctagaa tatcccgggt cgacccacgc gtccgcccac gcgtccgccc acgcgtccgg 60
 tcccattctg atcctgtgga cagtgggtta ataatagtaa taaaaatgat aatccacctc 120
 ctctgcttcc caggcccagc agcaggagct cccccgtctc cgtcctcctc cgcctctgtc 180
 aggggtcccgg tcggacttcc tcacgacgc cgcgccaaat cccgtctcgt tcttccgttc 240
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 tgcaaaacca ttacctggt caggcatgcc cagggcattc acaacgtcgc aggcgagaag 360
 gacttcggcg cctacatgtc acatgaactg ttcgatgtc agtcaaccc tttgggttgg 420
 aaccaagtcg atggtctgcg ggagcatg 448

<210> 720

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-022-Q1-E1-G3

<400> 720

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 agacgcttga ggggcaggcc ccatctgatg ccgccgtctc cacacccaag gttgcgcccg 180
 agggcactcc aatctccgtt gaggttgagg ctgatgaaca ggtagctgac aaggtggtgg 240
 tggaggagcc ggctgcggcg gccgacgttg agcatcagaa ggctaagtga gtgctcgtctc 300
 cagaggcggc cgtcgccgag cccgaccaca aggaggagga agccgtggag aagaccgtcg 360

tcgaggagga gaagccagcg gcagcagccc atgcagagga aaatgtcgcc ancgccgccg 420
agaccacga 429

<210> 721
<211> 437
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G4

<400> 721

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gacgctggcg cagcgggaagc cgaccaaccg gtacatcagc tacgcgggcg tgcgcgcgga 120
ccaggtgccc tgcaacaagc gcggccgggtc ctactacagc aactgcgagg cgcagaaggc 180
cgccaacccc taccgcccgcg gctgtcccg catcacgcgc tgcgcccga acatgaactg 240
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gtctggtctg cctgcctgcc aggtcacgca gcctggctcc accgatcgca caccatacat 360
tgacgtcgtc gtcgcgcccg tacgtgccgt tggacgggtg aagaggcggg ggcgctacga 420
cagtatatat atacaca 437

<210> 722
<211> 423
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G5

<400> 722

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cgtgctagcg gtggccgccc atgtcgccaa cgccggccac gccaagcccc tgacgcctgg 120
cgggcgcgtg gtacaccaca accacggcaa gttcacggcc gggccgtgga aaccgcacca 180
cgcgaccttc tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt gcgggtacaa 240
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tgacggcgcg gcctgcggcg ggtgctacga ggtgcgctgc gtggacagcc ctacggggtg 360
caagcccagc gcggcgacac tgggtggtgac ggcgaccgac ctgtgcccgc ccaacgacca 420

gca

423

<210> 723
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G6

<400> 723

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ctgagcgtgg ccctagtggg cctgtcctc tgccacctcg ccaccaccgc ctccgcccac 120
cagaaagaca tccacgtcct cggcagcgtc gacggctcca gcgacggcag cagccccgag 180
tccgaaggcc gcgtcgtcta cgcgacatg aagctggctg atacggaatc cgatgcgccg 240
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gcaaggtggt caaaaccgag aactaattaa gggctcgatt gtgtgtccgg ctactactgt 360
tcttgccata attatatata gatacgcaaa gtgtggccaa gcctaccac atgcatgcta 420
ttgca 425

<210> 724
<211> 399
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-G8

<400> 724

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aatggcctcg gttccggctc cggcgacgac gaccgccgcc gtcatectat gcctatgcgt 180
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cgtgtactgc gacacctgcc gcgccgggtt cgtgaccaac gtcaccgagt acatcgcggg 300
cgccaagggt aggctggagt gcaagcactt cggcaccggc aagctcgagc gccccatcga 360
cggggtcacc gacgcgaacg gcacctacac gatcgagct 399

<210> 725
 <211> 428
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H9

<400> 725

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atgatgacga ggatccagac tcagctgtac acgagacggc tcaagaccga gaaggacaag 180
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ggtgaaggct gggatcatag cctgcagtcc aaggagcaga tggaaacggg gcagaagatg 300
aagcaggaag ctgctacaag gcggcaaagg gccttgtcat acgcattctc tcaacagtgg 360
aggaacagga acacctcttc tgcgcgagct gcgcatgggc ctgctcccat gtacatggga 420
cctggcaa 428
```

<210> 726
 <211> 404
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A1

<400> 726

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acaacctgat gcaggacctc aagacggggg acctgacgct gacctcgccg cacaccgtgt 180
tcatcagcca ggccatcggc acggcgctcg ggtgcgtcgt caaccgggc atgttctggg 240
ccttctacag ggtggtgcag aacggcgaca ccgacgtctt cgacgcgcc tacgccgag 300
tgtaccgcag catcgccatg ctgagcgccg ggcaggacgg gataccaatg cacagcctct 360
ggctctgcaa gctcttcttc gcgctggcgc tcgcgtcaa cgtg 404
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<210> 727
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A2

<400> 727

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caagggaaac cttgacgggc agggcccagc cgtgtggagc aagaactcct gcaccaagaa 120
gtacgactgc aagatccttc ccaactcgtt ggtgatggac ttcgtgaaca acggggaggt 180
gtccgggggtc acgctgctca actccaagtt cttccacatg aacatgtacc ggtgcaagga 240
catgctgata aaggacgtga ccgtgacggc gcccggggac agccccaaca cggatggcat 300
ccacatgggc gactcatccg ggatcaccat caccaacacc gtcattggcg tcggcgacga 360
ctgcatctcc atcggccccg ggacctcaa ggtgaacatc accggcgtga cctgtggccc 420
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<210> 728

<211> 391

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-A3

<400> 728

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tggggccgcc agcaggttca gccgttcctg ttcttgataa aacgagagaa ggatggcagt 120
gtttcaggga gctgtcctat tcttgtttct cctcctcgtc gcagcagagg tgggaaccat 180
cgatgccaaa atgggagtag ccatgcccat gcatgccttg ataatggaga aagcgaaaca 240
gcaggagacg gagaagaagg aggagaaaag cacggagaag gaagagagtc aatgcttata 300
gccgagtctc cagttcgagg gcttctgctt caacagcgac agatgcgccg aggtgtgcat 360
gaaggagagc tttcncggtg gcgagtgcaa g 391

<210> 729

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A4

<400> 729

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gagagccttg ttctcctcgg tcctcttctg catcgtgcat ggtgagaagg aagagtcaaa 120
gggcatcgat gcgaaagcgt ccgggcctgg tgggtccttc gacatcacca agttgggctg 180
ctccggcaat ggcaagacag acagcacgaa ggctgtgcag gaggcattgg catcggcgtg 240
cggcggcact gggaagcaga caatcctcat acccaagggc gacttccttg tcggacaact 300
caacttcaca ggcccttgca agggcgacgt gaccatccag gtggatggca atctgctggc 360
gaccacggac ctaagccagt acaaggacca tggtaattgg atcgagattc tacgcgtgga 420
taacctggtc atc 433

<210> 730

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A5

<400> 730

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tgtttgggca atctggtgct ggtaacaatt gggctaaggg ccactacacc gagggtgctg 120
agtcattga ctctgttctg gatgttgga ggaaggaagc tgagaactgt gactgcttgc 180
aaggattcca agtatgccac tcccttggtg gtggactgg atctggtatg ggtacgctgt 240
tgatctcaaa gatcaggga gagtaccctg accgcatgat gcttacattc tcagttttcc 300
cctcaccgaa agtatctgat accgtgggtg agccatacaa tgccactctt tctgtccacc 360
agttggtcga gaatgctgat gattgcatgg ttctcgataa cgaagccctc tatgacatct 420

<210> 731

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A6

<400> 731

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gtc gatg cgg gcac atgttg cgat ggctgt ggcgttggtg ttcttgggtga gcggcgcatg 120
gtgcgggtcct cccaaagtcc cccagggcaa gaacatcacg gccacctatg gcaaggactg 180
gttggacgct aaagcgacat ggtatggcaa gccgacgggt gccgggtccc acgacaacgg 240
tggcgggtgc ggggtacaagg acgtgaacaa gcccccttc aatagcatgg gcgcatgcgg 300
caacatcccc atcttcaagg atgggtctggg ttgtgggtcc tgcttcgaga tcaagtgcga 360
taagcctgtg gagtgtctcg gcaagcccg ggtgggtgcac atcacggaca tgaac 415

<210> 732

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A7

<400> 732

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tgacgggtgcg caagcccggg gacagccagt ccaacatggt gacggcgcaa gggcggacgg 120
acccaacat gccacgggc atcgtgtctc agggctgccg catcgtgccg gagcagggcg 180
tcttccccga ccgctccag atcgccacct acctcggccg gccgtggaag gagtacgcga 240
ggacgggtggt gatggagagc accatcggcg acctcatcag gccggaaggg tgggaggagt 300
ggatggggcga cctcggcctc aagacgtct actacgccga gtacgccaac accggcccgg 360
gcgccggcac cagcaagagg gtcaactggc caggctacca cgtcatcgga c 411

<210> 733

<211> 357

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A8

<400> 733

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atccttatgt tttgattgcg aaatgtgttc ggctcgactg aaacggacat gcgatcttac 120
attcccaatg caatgctgtg gctgagatgg gttcatctgg cctccgcaa taagccagga 180
ttgccgttgt tccttgcatt aatatcagtc gattcagcaa caactctgac aaataatttt 240

caaagagaat gaatgatcat ctcatatatg agttagacaa cagggatatg caaacgagaa 300
 gaatgacaac ttggggacta gccaaagaaa taaatggcgc ctcaaataac ttataag 357

<210> 734
 <211> 447
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-A9

<400> 734

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 gctatctgct aaggaatgtc gaccggttta gataccttct accgggcaac tgcaggagag 120
 aaagtggcta ggttttatgg ccactaccc tgcaacctgt tgtgctggg tgggtgggtg 180
 ccagtgccac actgccccgc tgcaaagctg ctgtccatgg gatattctgt gcagttcacc 240
 tggtagcgtt gcctaacgta gttgaacaaa tgctttgggg aagaattggt tcatggatgg 300
 gggtagcac atgattctct aatgtgtaat agaacatggg aggaggatct aacggcatag 360
 cgcacgcttg gtctggctg ggtgtgcatg agctgagcgg tttgtcattg tcattcatta 420
 cttccctgat tgatatatat aaactca 447

<210> 735
 <211> 429
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B1

<400> 735

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 ttgctctgaa tgcttggcgt cgtataggct gccaaacaag agaagctatt aagaaaaaat 120
 ttctacctga tctacttcaa atatatgaag aacaggtttag ggccttcatt gaaggtagtg 180
 gtgacagcga cgtgcttggt ctgaatgtcc aggaccggt ccagaggctg cttctgcacg 240
 gtgtttgtga gttctataac gtaacctcaa tgaccacaag cagtgtgaagg gacgggaagc 300
 catggaagag caccaccatc aagaagaggc atgtcaccgg tcttcctccg agaatcacat 360
 tagttagctt cctgaggatg aggaagaatt agtcgtcca gtaacatgtg gatgtgaggg 420

tcctacact

429

<210> 736
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B10

<400> 736

gggccggttaa tcacgggtcg acccacgcgt ccgggagggc aatgacgagg gcccaggaga 60
ggcggccatt gaagaaccag ttggttctct tggtcaatg tcgctctgt cgcattctatt 120
catgtataat ccagaaatgg aggatggcaa tgacgaggac tcaggagagg aggcggccat 180
tgaagaacca gttggttctc ttggcgcaat ggcgcctcta ttcattgtatg atcaagaaat 240
ggaggacaac gaggaggatc aggcacacta gatgcagatt gcaccagctt caccgaaccc 300
tttgttttgt gtgcgggggg gctctactta tgtaatgtgg aatggaagga ttgcgcaagc 360
ttaaagatg ggctggatcg gcctgtttt ttaactggtt ccctagttac tgccatctaa 420
tagccaacat ttttcccgt tttgt 445

<210> 737
<211> 424
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-017-Q1-E1-B2

<400> 737

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caccaagctc aacaacagcc agtcgcgaa aataatgaag agccgcagca tggcatcatc 120
ggccgcgctc ttggtgctag cctcgcgct agtggcgggc accgccccac aggtagcgga 180
ggcaaagaag aagagagcgg cggagagcgg cgaggcgggc gaggcgaaga agatccagga 240
cgacttctgc tcgacgctgt gcgagggcaa gaaggggacg gacctggtcg tgtgcaagga 300
gtcctgcgcg ctctcccagc agtccaacct ggtgctgtac ggcaggatcc agtgcaaggg 360
caagtgcacc gagcagaagg gcatcacggc gccggccatg aaggtctgcc angaggagtg 420
cgac 424

<210> 738
 <211> 433
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-017-Q1-E1-B3

<400> 738

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catttccaac tgacaagctg atggagaacc ctgatttcta tagtgatctt ctgagagaaa 120
accttgatat aagggtcagg ttgggtggtta actacaatgg ccttagcggtt ggtgcagtgc 180
gagatgtggt tgagaagtcc cttggcctgc ggctgcagaa gatgaatcct aacacagact 240
ttcactgctt gaagacctt gggttctcact tcacagaaga tatcgctata ctttcgggta 300
cgaagattga cttctgtcaa acatcagatg ggaagcttat aacagaaatt gatgggaaac 360
aaattggtgc tggtcggagc aaagatcttt gcaaggcttt cttcgacatg tatattggtg 420
attcaccggt ttc 433
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<210> 739
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B4

<400> 739

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ggtcaggaat atccgggtcg acccacgcgt ccgcccacgc gtccgcccac gcgtccgtgc 60
taaaacgaga gaaggatggc agtgtctcag ggagctgtcc tattcttggt tctcctcgtc 120
gcagcagagg tgggaacccat cgatgccaaa atgggagtag ccatgcccat gcatgccttg 180
ataatggaga aagcgaaaca gcaggagacg gagaagaagg aggagaaaag cacggagaag 240
gaagagagtc aatgcttatc gccgagtctc cagttcgagg gcttctgctt caacagcgac 300
agatgcgccg atgtgtgcat gaaggagagc tttcccgggtg gcgagtgcaa gcaggtcgtg 360
gccacgcgca agtgcttctg caagaagcct tgctagttca tcggtcttgc taattgttga 420
tgggtgcttc attaatgtga 440
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<210> 740
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B5

<400> 740

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cgcctggccc gttgcgccag aggttcggg cacgcgacca ccggcggcct cggcggcaag  120
atctacgtgg tgaccgaccc caccgacctc gacgtggtga acccgcgccc cggcacgctg  180
cgctggggcg tcatccagcc cgcccgtg tggatcatct tcgcgcggtc catgatcatc  240
cagctctcgc aggagctgct catgagcagc gacaagacca tcgacgggcg cggcgcgcag  300
gtgcacatcg ccaacggcgc cgggatcacg gtgcagctgg cgaaaacgt catcatccac  360
aacctgcacg tgcacgacgt caagcacacc atgggcggcc tcatgcgcga ctcc      414
```

<210> 741
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B6

<400> 741

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ccacgcgtca gctttcgcgc tgtccggaga ggaggggcag gatgaggcag caccaaattc   60
atctggggat ctgagcgcgg gcgacaagat gacacgcgga ggcaagcccg cggcttcgtc  120
aaagccgaac ccgttcgact cggactcgga cacggagtca agcaataagc cggcgaacaa  180
gtccggggcg tcgtcgtacc aggccccgc cgactccaag aagcgggtaca aagactggtt  240
cagggactcg ggcaggctgg agaaccaatc ggtgcaagag ctggagcact acgcggcgta  300
gaacgccgag gagacgacgg acgcattcgc ctgctgctg cgcacgccg aggacatcag  360
gcacgacgcc agcgacacgc tgatcacact gcacaagcag gggga      405
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<210> 742
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B7

<400> 742

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agttctctag ttttttgaaa caattgcatg atgagattgt ccgcttggag ttcagtcact 120
acgatttgaa atcatcgaac acaatatctg caaaggactt tgcgttatct atggttgctt 180
ctgctgatat gaatcacata gacaagtat tggatagagt tgatgatttg gatgacaatc 240
ttgacctcaa ggatctgcgc attacctttg aggagttcaa ggcatttgct gatcttcgaa 300
gaaggttgga accatttgca atggctatct tcagctatgg caaagtaa at ggtttgttga 360
cgaagcagga tctaaaacgt gctgcatcac atgtttgtgg agtggacttg actgacaaaag 420
tagtggacat aattttccat 440

<210> 743

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B8

<400> 743

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tggggcttct tccacgtggt caacaacgac tacacgcact ggctcatgta cgccatcggc 120
ggcagcaagg cccccacat catcagccag ggcaaccgct acatcgcgcc gcccaacctt 180
gccgcgaagc aggtcaccaa gcagcatgac acgccggagt cgggtgtggaa gaactgggtg 240
tggcactccg agaacgacct cttcatggaa ggcgcctact tcaccgtcac cggcggccag 300
attaacaggc agttcaacaa gaaggacctc atcaagccca ggaacgggtc ctacgtcacc 360
aggctcacgc gctacgccgg ctccctcgcc tgcacgcccg gcaagccctg ct 412

<210> 744

<211> 478

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-B9

<400> 744

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caggaaggag aaatggcttc cgcacacaac gctctccggg tgtttttcat cctagccgtg 120
gtatgtgccg tatgcacagc gaaaaggaca ggagccaaga aggaagaatc ggccggcagcc 180
cctggtggtg ctgctggagg cagcggcggg acgttcgaca tctccaagct cggcgcgacc 240
agcgacggca agacggactg cacaaaggca gtccaggacg cgtggacgtc agcgtgcgaa 300
gcgaccggaa gcgccacggt ggtgatcccc aagggcgact acctggtcgg ccctctcaac 360
ttcactgggc catgcaaggg cagcagcatc gccatccagc tggatggcaa cctgctggga 420
tcaaacgacc tgaacaagta cacngcgagc tggatcgaat tgtctcacgt taacaaca 478

<210> 745

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C1

<400> 745

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gagccgagaa ggccgaggtg atgctgctca aggagatcgc gcagaagctc tgcaaggaca 120
cgacaccacc agttccagcg gcagcagtgg ctcagcacag cttttacaaa gggggcaaca 180
cacagccggc catgaccatc actgtgcgac caccacggca cccggctttg cttatgcaaa 240
ggaaactggt gaagaagaag ccatcactcc ttgctgcagt ggtcaagtgg gttacatcaa 300
tcatgtggtg gcgaaggaaa tcatcccgcg tcaagttccc tattgggcag tgcggcaaca 360
acgtggggct gcttctgctg ctcgacaagg ctcccagggc aggccacggg caccagaggc 420
cctcccaag 429

<210> 746

<211> 475

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C12

<400> 746

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tcttccatcc tacttgcaac gtcgatgctg gctgcgctgt ttgcggttgg tttgtgcacc 120
 accccgctca ccttccaggt tggcaaggga tccaagcctg gccacctgat cctcaccccc 180
 aatgttgcaa ccatatccga cgtggagatc aaagagcacg ggggcgatga cttctccctt 240
 acgctcaagg agggcccaac gggaaacttg acgctcaaaa caaaggcccg ctcaagtacc 300
 ccccttgcaa ccgctttgct gtcaagtccg gttgctaccg catcgctgac gacgtcatcc 360
 ccgctgattt caaagccggc accacctatt agaccacact cagcatctaa tcagcctctg 420
 atgatgaatt atatttcaaa agagctcaac tgggtgctcat gttagcaaga caata 475

<210> 747
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C2

<400> 747

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 ggccacgcca agccccctgac gcctggcggg cgcggtgttac acgacaacca cggcaagtgc 180
 acggccggggc cgtggaaacc agccacgcg accttctacg gcgggcggga cgggtccggc 240
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 gtggccgtga gcacggtggt gtttggcgac ggcgcggcct gcggcgggtg ctacgaggtg 360
 cgggtgcgtgg acagccccag cgggtgcaag cccgacgcgg cggcgctggt ggtgacggcg 420
 accgacctgt gcccacccaa 440

<210> 748
 <211> 432
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-C3

<400> 748

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tggaaatgca tataactggag ctgatgcagg tacaagtgtt tcaggtggag gatccggtgg 120
 cgccagtgca ggtaccagtg ctaccgtggg tgctggtgtc tccggaggtg ccaaagttgg 180
 tggtgggcgta ggaggaaatg caggaggaag tggcaacgtc tataactggaa ccggtgccga 240
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 tgctggtgtc ttcggaggcg tcaaatttgg tggcgggccc ggaggaagtg tangaggaag 360
 tggcagtgtc gctgcangtg cttctggang gagtanatca tcgggggggtg gctcagattt 420
 tggatatggt tc 432

<210> 749
 <211> 436
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-017-Q1-E1-C4

<400> 749
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 ggcggtgctg cgtcgccggc gtcggtctcg aaccgccaac tggcgccgtc cggccgtttc 120
 gaccgtgcgc gcgcccggc gcagtcggcc atcgccacg tcgccgaggt cgccgcgtac 180
 cgctcgtct tcttgactc gcaccactcc ttctacggcg ggctctacgt cgggggcgtc 240
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 tccatcctcg tggaccgcgc gcagccggtg gccgtccggg aggtgatgaa ggctcgttc 360
 caggggttcc tcatcgtcct gtcgcccgc gccagcgaca ggagcttcac ggtggangga 420
 cacgcgatgg tcgaag 436

<210> 750
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C5

<400> 750
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 cggcggtttt gctgggtccc gcgctcctcc tctcctagg ctgttctggt tggggctgcg 120

gcggagggaa ctaggtaagg gggaaggaaa ggggaggttt gagggagagc gcagcggcag 180
 cggcagcagc gatgccatcg cacgcggatc tggaccgcca gatctcgag ctgcgggatt 240
 gcaagttcct gcctgaggcg gatgtcaaaa cgctatgcga gcaggccaag gcgacccca 300
 tggaggagtg gaacgtgcag cccgtgcgtt gccccgtcac tgtctgcggc gacatccacg 360
 gccagttcta cgacctcatc gagctctttc gcatcgggtg cgacgcgccc g 411

<210> 751
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C6

<400> 751

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 ttcgacaagg acggcagcgg gtgcatctcc aaggaggagc tggagcaggc gctcaaggag 120
 aaggggctcc tggacggcag ggacatcaag gacatcatct cggaggtcga cgccgacaac 180
 gacgggagga tcgactacag cgagttcgtg gcgatgatga ggataggagc cgccgagccg 240
 aacccaaga agcggcgcca cgtcgtgttg tagcctgtgt aggagcatgc gtagatgtag 300
 ctgctgatat atggtatggt atatcggatg gtaaaatgga acggcgcca gcagttgatg 360
 ccattgccac gacagtgggt gcttgacgc tggctgagca gcacaaggcg cgcg 415

<210> 752
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C7

<400> 752

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 cgcgagtcct ccgagccctc gccgaagcgc tcctcgatcc ccgccatgcc gcacgaagaa 180
 tgcgtcgagg gcatccgctc cgcgtcaaaa catcccacgg tgcggttcct gagggagcgg 240
 atggagagtg ccgggtgcct ggtgtggccg cgcctcatcc gggcggcgac ctgctcctcc 300

gccggcgggt acgctagcca gcaagggata caagtttgct gcaatcacat gacctgtcaa 360
 gatgagataa ctcagggtcat gattcatgaa ctgatacatg cttatgatga c 411

<210> 753
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C8

<400> 753

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 gcggggcgca tgggtgggca gaaccagcgg ctcaacgtcg tgccgacggg gacgatgctc 120
 ggcgatcatga agggccgggt cgctggcgcg acccgcgggc acgcgctgct gaagaagaag 180
 tccgaacgcgc tgacggtcca gttccgcgcc atcctcaaga agatcgtcgc cgccaaggag 240
 tcgatgggcg agacgatgcg cgcctcctcc ttctcctcgc ccgaggccaa gtacgtcgct 300
 ggcgacggcg tccgccacgt catcctccag tccgtccgcg cggcatccgt ccgcgtccgc 360
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<210> 754
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 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-C9

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 gccgaggtgt gcatgaagga gagctttccc ggtggcgagt gcaagcggga cgtggccatg 420
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cttc

484

<210> 755
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D1

<400> 755

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gtcgcgctcg ccaagtgcga gctcgccaag aagagcgacg acgtcgtgaa cgggcccctc 180
ctgaccgaga agatccaggc gaagaagacg ctgatcgtgg ggccggacga ggagttcaag 240
accgtgcagt ccgccatcga cgcggtgccc gccggcaacg ccgagtgggt catcgtccac 300
ctccgctctg gcctgcacag gggcaaagtt gtgataccg agaacaagcc cttcatcttc 360
gtgaggggca acggcaaagg ccggacctcc atctcccacg agtccgcctc ttccgacaac 420
gccgagtcgg ccgcg 435

<210> 756
<211> 148
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D11

<400> 756

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aacacacaag caaggattct acgaccacg ggcatgcacg agccgatgag cccctgcaac 120
tttcaagtgc aaccgccggg gctgtttc 148

<210> 757
<211> 460
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-D12

<400> 757

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aagggcaagg tgcattggcg cggtgccgtc aaccgctgg ttgccggcat ctgctctcgc 180

gccccattcc cagaggtttg cacggccaca gccggggcgc atgcatccaa gtacccgggc 240

atcgacaatt tggccgtgct gaacatgcag gtggccgcgt tcgccaagcg cacagcgcag 300

gcgcggaagc acgtcgcggt ggccggccgc actattccac cgccgcaggc acaggccctc 360

aggacctgcg acacgatgtt catgaacacg caagacgcca tccggggccgc gcagcgagcc 420

atcgcgttca aggacacggg caccgcgaag atcatgctgc 460

<210> 758

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D2

<400> 758

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caaagggcat cgatgcgaaa gcgtccgggc ctggtgggtc cttcgacatc accaagttgg 180

gcgcctccgg caatggcaag acagacagca cgaatgctgt gcaggaggca tgggcatcgg 240

cgtgcggcgg cactgggaag cagacaatcc tcatacccaa ggtgacttc cttgtcggac 300

aactcaactt cacaggccct tgcaagggcg acgtgaccat ccagggtgat ggcaatctgc 360

tggcgaccac ggacctaacg cagtacaagg accatggtaa ttggatcgag attctacgcg 420

tggataacct ggtcatc 437

<210> 759

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-D3

<400> 759

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 tgcagcagcc gctggcgccg cagctcagcc tgcccagcgg aaagaacaag ggcggcaggg 300
 cggcctcggc ggagatggcg gcgatcgaga agttctcca gttccaggac gccgtcncct 360
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<210> 760
 <211> 439
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-D4
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 cacaggaaat gcttctaatt ctttgggccc gagaaatgca agccgtgggg gagccgttac 180
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 tttgtgccgg tctatcgcc gccgctttcc tcccctattc atcaagaccg caataactgt 300
 cgctacctat gcttctcact tgtgattttt ggacacaata tgtaaggct cattcaattc 360
 taatgagacg cctgatgagg ctacttcgga ttgtcattgg ttattgatgt cttatgaatg 420
 aataatataa atttttttt 439

<210> 761
 <211> 54
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-D5
 <400> 761

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<210> 762
 <211> 390
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D6

<400> 762

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aagtttaact tgtttgcat tcaaacacat ccaatctcat tcaattcaca tggattgaga 120
gctaaccgaa caagcctgta gttggacaag ggtgtaacac ttatttgtca ggcgtaccgg 180
gcacagaccg ctctctatct gttcgtgggg atgtaactgt aagccttgtg acccctaagc 240
agtctgcgtc ttgtgcctgc tgctgtagcg gtagagcaga gagagagatc aaatgtaaatt 300
tacatctttt agctcaaatt cagcacaat tgggtgtcct aaaaaaaaaa gaaaaaaaaaag 360
acaactacat aggcaatcaa gaattcaatt 390
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<210> 763
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-D7

<400> 763

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gggacaggaa atcagcggcc atggcctcga ttccggcgac gaccttcgcc gtcattttat 180
ccgtctcttt ctgtgcgcg gctggcaccg ccgtcgacaa cgacctccc gactacgtca 240
tccagggccg cgtctattgc gacacctgcc gcgccgggtt cgtgaccaat gtcaccgagt 300
acatcgcggg cgccaagggt aggctggagt gcaagcactt cggcaccggc aagctcgagc 360
gctccatcga cggggtgacc gacgggaacg gcacgtacac gatcgagctc aaggacagcc 420
acgaggagga catctgcg 438
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<210> 764
 <211> 252

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-D9
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 cggaggaaat gctagtgcct gtgcagctct aggctgcagc tttcatcatt ggcgatcgat 180
 cgtaacaatg caaggttggt ttgtatataa ctcttggtt tggaatgccg cccgtaatta 240
 atggtcaact ct 252

<210> 765
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 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-E1
 <400> 765
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 atgccacacc cagtgatcag aggcacattg agaagccttt taaagtgaag gaggcagaac 180
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 acctccttga accagcttca ttgaaggatg ctatggataa tgtttctgca gtggtatctt 420
 gtgtcg 426

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 <211> 432
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-017-Q1-E1-E10
 <400> 766

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 caccgccgca ttaatagttt accttccttc gatcggtcac tctttcaaga ccgtagtggt 180
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 gacgaggact ggtagtcaa gccaccactg tccgcaggag catatgctgg caatttcaat 300
 gaagaagaat ggctggtcac accactgaag cgctcccggtg tcatgaatgg tattgaccat 360
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 gaagctgaag ag 432

<210> 767
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E3

<400> 767

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 aaacccgagc ctagcgctcc atcactccct ggagccgaag gggtaggacaa gatggccatc 120
 gacgaggcca gtggtgacgc cccagagggc gcagaagagc ttgaccctgc gctcgaagag 180
 gagacgccga tggaggagac gatccgtgtg acgcgtgcc aagtaaggag gcgcacgacc 240
 accgaagatc ctgctgggaa ttagctgcag gccatcgttt ttcctttccc tgcacattgt 300
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 ggagatgtga tgttgaattg gttctttgtg acaca 395

<210> 768
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E4

<400> 768

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cgtatcgggg gccgccaacg ccgcgggcggc gcccgggcggc atgtccatca tcacctacaa 180
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 cgaccgcccgc ttcctcgtct tctgggacaa cctccgcttc gtcgacgcgc acaacgagcg 360
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<210> 769
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 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-E5
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<210> 770
 <211> 414
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-E6
 <400> 770

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aagcgtgaag aagagatccg tgaaccccat atggcaagag gagctaactc tgaccgtcac 300
 agatcccagc caaccactga agctggaggt gttcgacaag gacaccttca gcagagacga 360
 ccccatggga gacgcagagg tggacgtggc gccactgatg gaagcagtga gcat 414

<210> 771
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E8

<400> 771

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<210> 772
 <211> 296
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E9

<400> 772

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 cgtctccaca cccaagggtg cgcccaggc cactccaatc tccgttgagg ttgcggctga 180
 tgaacaggta gctgagaagg tgggtggtga ggagccggct gcggcgggcg acgttgagca 240
 tcagaaggct aatgaggtgc tcgctccaga agcggccgtc gccgagcccc accaca 296

<210> 773
 <211> 329
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F1

<400> 773

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tcgaggggat ggtgtcattt gactacttga tcagctgcaa ggtactgggc aactgcgagt 240
cgaacctgtg ccccgaggcc ctccgccag ggaataccgc caccgactac acgacgcagc 300
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<210> 774

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-G5

<400> 774

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caaggacgag aaggacgtgg aagacgtgca ggtgacgggg tgcacgatcg ccggcaccac 360
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<210> 775

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-G7

<400> 775

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<210> 776
<211> 346
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-G8

<400> 776

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caaagtcccc ccaggcaaga acatcacggc cacctatggc aaggactggc tggacgctaa 180
agcgacatgg tatggcaagc cgacgggtgc cgggtcccgac gataacggtg gcggctgcgg 240
gtacaaggac gtgaacaagc ccccttcaa taccatgggc gcatgcggca acatcccat 300
cttcaaggat ggtcgggggt gtgggtcctg cttcaaaatc aagtgc 346

<210> 777
<211> 374
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-010-Q1-E1-H10

<400> 777

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actgtcgaac tatttggacg aaagttgtac actgcagtat gatgtaacca tcaaaatctn 360
ccctacattc gcct 374

<210> 778
<211> 441
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H11

<400> 778

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ccggcacttc ggcgcgtcca aggagacgct caaggcggag gcgacgacgg acgacagcgg 360
gtggtacaag ctggagatcg accaggacca ccaggaggag atctgcgagg tggtgctggc 420
ccggagcccc gaccgggggt g 441

<210> 779
<211> 424
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-010-Q1-E1-H3

<400> 779

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cgtcgagcgt tatccatgct ggggtgatac tgttgaagta aatacatggg ttagtgctaa 360

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actg 424

<210> 780
<211> 448
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H5

<400> 780

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tcttgacagag aggatcggtc accgtcgcgc cgcacaagct cgtcctgagg accgccatag 360
tcggcgcgac gactgcggtg gcgctggcga tacccttctt caacgccgtg ctggggctcc 420
tcggcgcggt cagcttcttg ccgctcac 448

<210> 781
<211> 201
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H6

<400> 781

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ctcatcttgt ttgttgggcc agtgcttgca ccacttattc ctggacttta cataccaact 180
cggttcttta tgatgcttct g 201

<210> 782
<211> 144
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H7

<400> 782

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atggactcta atgaacggtt tcaggacgac tagtatatgc ccatcggtac gctggaggac 120
catctcctgt acgtgcccc aatc 144

<210> 783

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H9

<400> 783

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tctgacgact ccgcgcttcc tctggtgcac ggccgcttct attgccgtcg cctggggctt 120
ctgctgcgtt accatggggc aaacaacgag gaaaatgccg agagagagag gtagagacag 180
tttggtcgtc gagtacatg gagggtgccc tgggtggccgg ggaatccttc acctgcgggg 240
tgctacatcg ccgggctgct gcacgtggt ctgcctctac taccagggt gactccattg 300
ccggacagcc aaaactctcg gtgcagtctc tgaaggccgt ctgtccctgt tccttcgggt 360
caagaacagg taccacagga tgacgcgcat ggaggatgct gtgatgagtt cgtgagtgg 420
c 421

<210> 784

<211> 357

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-A1

<400> 784

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ctcaacgagc ttctgctccg acgacgacga cgcgccgcca cagccacatg gcggacgacg 120
ccgtcgccgc cggagcggcc gtttgctgcg cagggccggc ctcgctgtct tctagcagga 180
agcagcagca gcagcccgc gacgccggct gcggcagcag cagcagcgac gaccactacc 240

agcacgacgt gatcatgctg aggcggacga ggagcgggcg ggcattcccg cgcgcgatct 300
ccgtgatcgg caagggcggg cggccgtggc tctgcctgcg ggcgcacccg cgaggggt 357

<210> 785
<211> 437
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-011-Q1-E1-A10

<400> 785

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aacctactgg acacggtgag cgggcacacg atccaggtgt acccgcggtc atggacggcg 180
atcatgctga cattcgacaa cgcgggcatg tggagcgtcc ggtccaacgt ctgggagcgg 240
tactacctcg gggagcagtt ctacatcagc gtcattctgc cggcgcggtc gctgcgcgac 300
gagtacaaca tgcccagaaa cgcctccgc tgcggcaagg tcgtggggct gccgctgccg 360
ccatcctacg cncgcgcg ctaaagacga cgaaggcgcc gttttcacct cgtgttctga 420
ccatccagtc taactaa 437

<210> 786
<211> 356
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A12

<400> 786

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ggaggaggag gagcagcaac agccgcatca gccacagctt ccatggttcc tgcagaggca 120
gcgcccgcgc gttcttcttc catggctccg gccccatcca cggccgcgtc gaccgttccg 180
gaaacatccg gtggccgacc tggttaacgg atttttccgt ggttttctact gaaggcgagc 240
actatgctcg ggacgtagac ctccaaaata tgcaatggta cggtagatat caatggacgt 300
aaaccggtgt atccatgagc ttaattaaca tgaacaatcc tgctttgcct aaaaag 356

<210> 787
 <211> 448
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A8

<400> 787

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cccgggtcga cccacgcgtc cacggagccc cgcctccgcc tcaccgttca gaagcttgac   60
gactccttct tcgacattga aatcgcgcggt tcggccacgg tgtgggagct caaggtgacc  120
atagagaact tgttctccgc cctctatgac gacacccaga agaccatctc ttggaatcac  180
gtgtggagtc acttctgctt atgcttcaag gacgagagac tgacggatga caaggcaaca  240
ttgcgtgggt ttggtataag agatggtgat gtggtacatg cacttcctta aacagccata  300
ggttcttggg tgcatttttc ctttttagtgc cgactaatte tgctctgtct tgtgagataa  360
gccagaatat tacttaccct gtttcattta ccaaatagaa gttcctggat gcattttgcc  420
tttttagtgcc gactaattct gctctgtc                                     448
  
```

<210> 788
 <211> 338
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B10

<400> 788

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attccccggg caaccacgc gtccagcaaa ccgtgagggt aatcatcagc ctccacttaa   60
agccagcaca tccaaataac accgggagac ctcagccctc aggcaagccg accgccgacg  120
taccatcgcg ccaagccgag aagaaagatg gagatgatca aaaggatcct catcgccgcg  180
ctcctcgtag tcgctgtctc ggccaccgca gtgctggggt ccaacgatgc cgcagccgcc  240
ggcgtccag cgcacccga gtcctctgag tcagttgaag cccccgctgg tgccgccggg  300
gatggaggag gtagaggaac cgccgctgag cgctccga                                     338
  
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<210> 789
 <211> 121
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B11

<400> 789

tgggggggtca cccaaaagga tttcactgac cttcgcttta aagcatcttc actggtaata 60
ccttgggggta cccaaattta atcccctggc agtacatttc cctttcgcta actggcaata 120
a 121

<210> 790

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B12

<400> 790

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cttctgctgc gttaccatgg gccaaacagc gaggaatatg ccgagagaga ggtagagaca 180
gtttggtcgt cgagtcacat ggagggtgcc ctgggtggccg gggaatcctt cacctgcggg 240
gtgctacatc gccgggctgc tgcctcgtgg tctgcctcta ctaccagggc tgactccatt 300
gccggacagc caaaactctc ggtcgagtct ctgaaggccg tctgtccctg ttccttccgg 360
tcaagaacag gtaccacagg atgaggcgca tggaggatgc tgtgatgagt tcgtgagt 418

<210> 791

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B2

<400> 791

ccacgcctcc gatacgagaa actttctccc tctccacct ttctcctttt cttgccacgg 60
caaaacacct tcgccggcga gagcatggcg atggcgtagc gtgtcctgga ggtcaccttg 120
gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc ggactcgcat ctacgccgtg 180
gcttccatct ccggattcga cctccgcac ccttcccaca gcaccaagc agaccacagc 240
aacggctgca acccctgctg gaacgccgtg gtacacttcc ccattcccggc tgccgctgac 300

acccgcggcc tcgcactcca cgtgaggctc cgcgcccagc gtctatacct gggcgatcgc 360
 gacatcggcg aggtgtttgt gcccatcgac gacctcctgg ccggcgccga caaggggtggc 420
 gatccgaggc ccgtgagc 438

<210> 792
 <211> 460
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B4

<400> 792

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 tctttttctt aggcgcacct ctacacttct cgacataacc atcgagaggg cggtcgagag 120
 aaacgagagc ggcagacacc atggggagct cgaggaccat cgttgcgctc ccctgctcc 180
 tcctcgacct cctcctcctg gctttcgcg ccaccgccga ggcccgcggt gtccccgagc 240
 tgtttggcga ggaccaattc cagcggacat gcaaccaggt gcacttcagg aagatgtgcc 300
 agagcttgac gaggctcccg agggtgacaa cgccgcgcga actgctgcta gcgtcgatgc 360
 gcgtcgcggc ggagaaggcc aaagaggcca agagccgggt ggacgagttc gcggcgagga 420
 accacgaggg ccggccgatg gagtccatcc tcggagcctg 460

<210> 793
 <211> 454
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-011-Q1-E1-B6

<400> 793

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 ctggtgcctc ggctgctca tcctcgagat gctcaccggg aagccgccga cctacgacct 120
 gcccaaggcg gcgggggcg tgccgtcggc cgaatcgttg tcgtcaccgc agaagccggg 180
 tcggcgggcg ggcaacggca cggacctggt gaccgtcgtg gggtcgacgc cggagggcga 240
 gtggctggac accgtggtgg acccgacact gaggggcgag gaggaggagg acaaggagga 300
 gatggtgaag ctgataaggg tcggcatggc gtgctgcgag agtaacgtgg acagccgggtg 360

ggagctcaag accgccatcg acaagatcga ggagctcaat gccaacgagc gccccgcccc 420
cgacgacgag caggccttct actcgacggg gaac 454

<210> 794
<211> 340
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B8

<400> 794

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ccggaggcca tcacgtcaa ctgcgccaac aacctgccat gccagggcgt gcagctcgtc 120
aacgtcgaca tcaagtacaa tggatccggc aacaagacca tggccgtctg caagaatgcc 180
atcggaagt ccatcggtt ggcaaaggag ctggcggtgca tttgaacaa ttgactaaca 240
tgcatatatt atgtactagg tttgtgcccg tgcgttgaca cggaagttaa aaattagtat 300
aaaacaaaga tacataacga taaatatcac tatgacattc 340

<210> 795
<211> 327
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B9

<400> 795

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cttaattgcy cactgctcg ttatcctcct cttgcattgc attgcaggtc gtagttgagc 120
agcagcaacc actgcacagg atgtcgtggc agacgtacgt cgatgagcac ctcatgtgcy 180
agatcgaggg ccaccacctg agctctgccg ccatagtcgg ccacgacggc gccgtttggg 240
cccagagcac cgcattccca cagttcaagc cagaggagat gaccaacatc attaaggact 300
tcgacgagcc tgggtttctg gccccga 327

<210> 796
<211> 410
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-011-Q1-E1-C10

<400> 796

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ccacgcctccg tctttatttg taatctgaag cttacaggaa catttgagtg gatcatggac 120
ggattggtag gcctcttgaa agtccgggtg gtgaggggca tcaaccttgc ctaccgcgac 180
gcaagaggca gcgatccgta tgcgtccta cgacttggca agaagaaact taagacgagc 240
gtgaagaaga gatctgtgaa ccccatctgg cagcaggagc taactctgac cgtcacagat 300
cccagcctag ctctgaagct ggaggtgttc gacaaggaca cgttcagcag ggacgacncg 360
atggggggacg cggagatcga cgtggcgccg ctggtggagg cggcgaacgc 410

<210> 797
<211> 140
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C11

<400> 797

cccacgcgtc caccgacgcg tgggtcgggg gctcccacgg tcacctataa ctccatcaga 60
tgggtaatca tctgtaaaat ataataataa aaataaaata aaatatgata taaatagggg 120
gggggctcta aaggatccat 140

<210> 798
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C12

<400> 798

gtaccggtct acaattcccg ggtcaacca cgcgtccaga caccacaag gactccgcgc 60
ccggcaggac acaacacatc tatcgcatag tcagcttaaa acatagtgat gatgcggtga 120
cgcattccatc ctccacgctt cttgtcttcg ccttaattaa tgattaattg ttatgatcat 180
gtcggccatc cgaatgccgt atgtatgcat gcacatcgcg actaattaat ccctgttgat 240

ttattactcc gtgaaatgta ctttctccgt acacacagca cactgctctt cggctaagat 300
gaaactggta taaaccaatg ttgcattctg cataaggccc ctgacatgga tgcgcgcctc 360
cactctactc gcgttcttgg cacctttggc taccattcac cacaatatgc catgactgga 420
c 421

<210> 799
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C6

<400> 799

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cctttcgaag aagtaacact tctccgtgag gcctgagccc ctgcgcgcgg tgagccaagc 120
cggcgcacgt cggcccgggg ctcacgtca ccaccgagcc ccaaccaatt aataatatat 180
atatatagct aggatcgatc gtcagtaaaa tggcaggctc cgccgtcctg aggagcccc 240
tgtccgtcct cctctacatc ctgcgcgcgg tgcccgccac cgccgcggcg acgccgaccg 300
acgccgccat cgacgaggcg tacgcgcac tcgtcaacct caccgctaac caggagtact 360
gggcgggagcg cgcggaggcg ggcacgcgt acaaccgcgc ggcgtaccag accgaccccg 420
tggccgtcgt gcagcgcttc aacgac 446

<210> 800
<211> 465
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-C8

<400> 800

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gcgcaggcgc atggccagct gccggcggac ctgcgcgcgg acgtgctggg taagctccct 180
gacgtgcaaa gccagctgct ggcgaacatt acgcccgaga tgatgagcag tctcgccgcc 240
gtgcagcagc ctgcggctgc tggccagcct ggggcggccc ctgctctccc ggccgacatc 300

cctcagatcc ctaagatgcc cgacctctct gggctggcca atatctcgtt cccagttatg 360
 ccgtcggagc ccatgatgcc acacctgccg cccggacttc tcgttgtaca ggtacgatgt 420
 cgccatccct aagttcatca ccaacatggg cgacggcaat ggcgc 465

<210> 801
 <211> 377
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-011-Q1-E1-C9

<400> 801

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 cctgatcgac ccccgccgcc acatctctcc gtgcgggttt cttggaccgc atcccgatcc 180
 gtcgcatgcc gcatacaatc ctcataggga aaagatgaac gaactccagc gattggttga 240
 tcgatcggct gcagattgct ggcacggcga cgaccgggtt cattgattgc tcgcgtgttt 300
 ttcttttttc cganatattt tcttgattg ggtgngaagg aggaaggaac tggtagctct 360
 ttcaatgttg ttcttga 377

<210> 802
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D1

<400> 802

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 caacaacagc cagctcgcga aaataatgaa gagccgcagc atggcatcat cggccgcgct 120
 cttggtgcta gccctcgcgc tagtggcggc caccgccccca caggtagcgg aggcaaagaa 180
 gaagagagcg gcggagagcg gcgaggcggc ggaggcgaag aagatccagg acgacttctg 240
 ctcgacgctg tgcgagggca agaaggggac ggacctggtc gtgtgcaagg agtcctgcgc 300
 gctctcccag cagtccaacc tgggtgctgta cggcaggatt cagtgcaaag gcaagtgcac 360
 cgagcagaag ggcacacgcg cgc 383

<210> 803
 <211> 446
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D10

<400> 803

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attccccggtt caaccacgc gtccaccac gcgtccgagc atcaatcatg tctggtcggt 60
cgtggacaat aatggcgctt ctctggcgt cgatgctgct cgtcgggctc gccgtgggct 120
ccgaggagga ggaggacggc ggcggaacaa agaagcccca cgtcaaccac ggcaagtta 180
aggcggagcc gtggacggac gggcacgcga cgtactacgg cgggcgcgac gggttaactg 240
acaccacgga cggcgggcgcg tgcggctaca agggcgagct ggggaaagac tacggcacc 300
tgacggcggc cgtggggccg tcgctgtaca ccaacggcac cgggtgcggc gcgtgctatg 360
agctcaaagg cccaagggc accgtggtgg tgacgggcac caacgaggcc ccgccgccg 420
tgacgggca gaaaggcgag cacttc 446
```

<210> 804
 <211> 264
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D12

<400> 804

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taccggtcta gaattcccg gtcaaccac gcgtccacgc aaacctccag aacatggtgt 60
aggcaatcaa aattgagcaa gtcgatagta caagagtgat gatacgctta ccattgctag 120
catgacgac gctaccagtg ccaccacaag gaccgcctcg gggcgtgggc ggtattggcg 180
atcgtatcag cggtcgccgc cgtgcgagat ttcgtcgcg tgctagccgc cgccacatca 240
ggagagctaa ccacgatggg gttg 264
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<210> 805
 <211> 459
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D2

<400> 805

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caagctcctt tccatcggtg ctgccccgca ctgctgccac cgagatcctg tcggcaccgc 120
cctccgcgcg ctcccgtgc cgcacgggac caacctgttc gcctgttcac cactcagcg 180
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gtcacgagtc agctgaagag caagttggta cctggaatct caagtcccag gtcaagaaca 300
ggtagccgag gatgaggcg atggaggatg ctgtggcgag ttcgtgagag gtctaggcca 360
tcgtctcca gtcaactttg ggttgctgga ccgttgtctc cttataatga aattatttat 420
ttattttgta tagaactcct gttatatagt aaagatgtg 459

<210> 806

<211> 357

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-D3

<400> 806

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cgccggctat cgtcatcgcc acagccgcaa cctcgaagga ggaggaggag gaggtggagt 180
cgccaagaa agaagcggct ctgtcgccgg cgccggagcc tatcgtcatc gccgccgctt 240
taacctcgaa ggacgangag gaggtggaat cgccaagaa agaagcggct ctgtcgccgg 300
cgccggcgcc ggaggccatc gttgccgtat cagcagtgga agacgtggtg gcggaca 357

<210> 807

<211> 462

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D5

<400> 807

cgtcaaacac ctccgggtc gaccacgcg tccacggacg cgtgggctgg acgtgctcaa 60

gttcgccatc cgctacgcgc tctccggcaa ggcttgaac aacatcaaca acaagacggc 120
cttcaccaac cgcaccgact acggcaaggg cgagcgagag ggcagtgagg ccacggcaca 180
gaggacgctg caccggcctca accaggccac cgccacctcc gacctcttcg ggcacaacca 240
gggctaccgc gagctgtcgg agctcgccga gcaggcggcc aagcgcgccg aggtggccag 300
gctcagggag ctgcacacgc tcaagggaca cgtcgagtcg gtcgtcaagc tcaagggcct 360
cgacattgac accattcagc agagctacac cgtgtaaact cgactcagtt tttttatttg 420
cttttttttg cagacaaata caaaccacac acatatatat at 462

<210> 808
<211> 442
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D7

<400> 808

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gcgggtcgtg cgggcccccg aaggtgccac ccggccccaa catcaccacc aactacaacg 120
gcaagtggct caccgctagg gccacctggt acggtcagcc caacgggtgcc ggcgctcctg 180
acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcattgacg 240
cgtgcggcaa cgtccccatc ttcaaggacg gcaagggctg cggctcatgc tacgaggtga 300
gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgtacatc actgacatga 360
actacgagcc tatcgtccc taccacttcg acttgagcgg caaggccttc ggctccctgg 420
caaagcccgg gctcaacgaa ca 442

<210> 809
<211> 278
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-D9

<400> 809

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tccaccatcg gtgcacagaa cgggtggccac gatgacgatc aacaacctcc tcctcgtctt 120

cgccctggtt tctgcggtcc ttggtgcggc gacggccgcc gccaacgcgt tcagcagggc 180
gttcagcatc tgggtggaga tgaaccagca gtgctacgcg ctgtacgtcc aggactgcgt 240
cagggaccgc ggcaacgagc ccctgtacaa ggagctgt 278

<210> 810
<211> 397
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E1

<400> 810

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ccgtcgatga agtcggtgga gaagacctgg agcttgctgc cgaggccctt ggcaagacc 120
tcggcgatga acatccgcgc gtagccgtgg atccgcctcg tcacgggcca cacgcacacc 180
accgggttgt cgggcctggg cgtcaccttg ttctccaccc ggtacaagaa cccgcggccc 240
gccaccggcg gctgctgccc caggaacttg aggttgctct cgaacttggg ctccggcagg 300
tccgtgtcga tccagttgtc cctgaggtac ccggcgctcc acaggggctc cccgggcccg 360
ggcgccggcg acctgcgcgg cttccacacg cagatga 397

<210> 811
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E10

<400> 811

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ggccagaacg agcgcaagta cgacaggctc gacctcatcc aggccaaggg cggccagtag 180
gccgagtcgc tcaccaggtg cggcggcgcg ctcaactgcc gcgtcggcag gaagtgctag 240
tgcgtgtgca gctctaggct gcagctttca tcattggcga tcgatcgtaa caatgcaagg 300
ttgtgttgta tataactctt gtgtttggaa tgccgcccgt aattaatggg caactctaac 360
actgcttgcc tttgcctgcc ggccagcaac accattgtcc cttgtgggtc ctgagttctt 420

ccttgtttat ccatgcatgg aaaccg

446

<210> 812

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E12

<400> 812

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tgctctgcct gctcctcttc tctggccgtc tcgccgcggc ggagaagact ttccgcggag 120

gcggaggcgg aggctacggc gggttggagg ccggtggcgg aggcggcggc ggcggtact 180

ccaccccgag cgaggcagcg ccatccacgc ctgccgtg ggagacgacg accccttcgt 240

caggcggcgg ttactccacc cctagcgagg cagcgccatc cacgcctgcc gctgaggaga 300

cgacgacgac tccttcgtca ggcggcgggg gttacggcgg tgcaaccggc aaggttcct 360

caagcggcgg cgggctggac cccgacggcg acccagaggt tgggctgaac gggaaggcga 420

tcgaggagat cgtgaacg 438

<210> 813

<211> 409

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-E3

<400> 813

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gctcggagggt cagccgccga gaagagctca taggcaatgg caaccgcaag gaaggatcct 180

cagcaggttg ataaagtcaa cctgaaacc agcgagtctg gcaaaggggt agtacggcgt 240

gcaaggctctg tcccgacctc tccggatcgc agatcgctcc catccccggc cccagtctca 300

gacaacgcca gccgaccggc atcatcactc aacactcgca cgacctcgtc ncggtccaca 360

acaacatcta gctcggcggc ctcttcaagc cacgggaaga cgatgcgct 409

<210> 814
 <211> 425
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-011-Q1-E1-E5

<400> 814

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aactgtttcc tcaacctccc gacccaacca cggccgtgcc cgccaaggcg ccaaccgcac 180
agcagcagct ggggtgctga cgtgctgtgg gtggttctgt tgtccatggc gcggaagcat 240
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ccactgtttc gggctgcata ccttgccaag gctggagatt gggagggtcac gctgggtggtg 360
ccttggtgtg ccaaggggga tcaggagctc gtttatccaa acaagatgag gttcagtttg 420
ccggc 425
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<210> 815
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E7

<400> 815

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tagtgggcct gtcctctgc cacctcgcca ccaccgcctc cgcccaccag aaagacatcc 180
acgtcctcgg cagcgtcgac ggctccagcg acggcagcag ccccgagtcc gaaggccgcg 240
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cgccggggcc gtcgtccggt tgaactgaga agcgtgcgtc cagccaagca atgtggtcag 360
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atatatagat acgcaaag 438
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<210> 816

<211> 51
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-E9

<400> 816

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<210> 817
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F1

<400> 817

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ccgcgacggg ccgccctccg agctggacgt gatgaaggag aagttctcca agctcctgtt 180
aggcgaggac atgtccggca ccggcaaggg cgtgccgtcc gcgctcgcgc tgtccaacgc 240
catcaccaac cttgcccgtt ccgtcttcgg cgagcagcgc aagctggagc ccatggcgcc 300
cgacaccaag gagcgctgga agagggaagt cggatggctg ctctccgtca ccgacctcat 360
cgtcgagttc gtgccacgc gccagaccgc ggagaacgga acta 404

<210> 818
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F10

<400> 818

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tctaagcaaa gacttgattt agttatggac ggattggtag gcctcttgaa agttcgcgtg 180
gtccggggta tcaaccttgc ctaccgcgac gcaagaggca gcgatccgta tgcgtccta 240
cggcttgga agaagaaact gaagacaagc gtgaagaaga gatccgtgaa ccccatatgg 300

caagaggagc taactctgac cgtcacagat cccagccaac cactgaagct ggaggtgttc 360
gacaaggaca ccttcagcag agacgacccc atggga 396

<210> 819
<211> 408
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F11

<400> 819

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ccacggcagg cccgacggca gcccacaaaga ggtggccagg ttccaggagg gcgtccggca 180
gggcgccttc ggctgtctcc tcaactccgt cgtcctcgga gccagctcct tcctcatcga 240
gcccattgtc cgcaagctca ccgccaaggt cgtgtgggtc atgagcagtt tcctcgtctg 300
cgtcgccatg gccttgggtc ccgtcctcag ctccgtggtc ctccgagaca tcggggggcaa 360
agtgaagac gccgcccgcg tggataaggc cctcaagacc accgcgct 408

<210> 820
<211> 449
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-011-Q1-E1-F2

<400> 820

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ctgacctccc aaagctgtgg tcgcgattca aacaaaaagg aaatgatcag gcgacaaccc 180
ggcatggatc ggttcctgca gctgctggcc gccggcgtgg ccgtgctact gctagtggca 240
acgcggggca tggctgacga cgacattgta aaagtengcg tcaactgggg atcgcagctc 300
tcgcaaccgc ttctccccgg ctccgtggtg aagatgctca aggcgaaacg catcgccaag 360
gtcaagatgt tcgacgcga ctccctggccc gtcggagcgc tcgtcgactc cggcattgag 420
gtcatgctcg gcatcccaaa cgacatgct 449

<210> 821
 <211> 324
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F4

<400> 821

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tgctgatcaa cactggcctg ctgccgccca ccgcccggaa tctatctatc tatctatctc 180
cttgaaacaa tatatcagac gatgccccag cgcgtgccgc tgatttgatg caagtatgct 240
gttttcattt gtaaatacga gtcgatccat actaagcgat acaggaaaag aaaaaacca 300
agggcggccg ctctagagga atca 324
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<210> 822
 <211> 342
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F5

<400> 822

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aagaggggtg ggtgggctgt ggacctcacc gagggcgagg ccaagccatt cgtcggcaca 180
cactacgtcc tcggcgacac gtggatccag ccaccgccca agtagcgacg catgccacac 240
gatatatcta tttgagtacg aagcaaaagc gagagacacg aatctctaata ctctttactg 300
atgagatggt ttgcttatat atatatatag acgagctaata ga 342
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<210> 823
 <211> 448
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-F8

<400> 823

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 gacaccgtgc agaggatcct gatcacctct gaacctgac cctgggagac gcagaacgat 180
 gatgccgcca agctcgatca tcacgagaag gctgcgaagc tgagagacaa taagtcggcc 240
 atcaggagga tatggcagtt cggcaaata aactcgtcgg gtgcttcgc ctccgcgacg 300
 gcgccggagg acgcggaggt tcttcagttt ccgaagtcgc caaggtcgga caacgagtac 360
 catgtcgtcc aggacctcac cgaggaggtg ccgttcattg agacgagagg cgaggaagaa 420
 gaagaagaag acggcgagcg catgaacc 448

<210> 824
 <211> 432
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-011-Q1-E1-F9
 <400> 824

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 gggcgcgccg cgggcagtag gagggagagg aaggggcgca tggcgggcgc gccggcgagg 180
 gcccgggccg actacgacta cttatcaag cttctctca ttggggatag cgggtgttggc 240
 aagagttgcc tctgttgcg gttctctgat ggttccttca ctacaagctt tattaccaca 300
 attggtattg actttaagat acggacaata gaaatggatg gtaagcgtat anagctacag 360
 atttgggata cagcggggcc aagaacgctt ccgtactatt accactgcgt tctaccgtgg 420
 acctatgggt at 432

<210> 825
 <211> 428
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-G1
 <400> 825

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 cttgcggtga tttggaggca gcctcacggc agtatggaat ggactcccc ggaatgatcg 240
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 gtcgagtgtt ttatttcggg cactcgacaa agagctcttt gccgagtgcc acgcaaaaaa 360
 ccctcggtaa aagaaaacac tcggcgaaaa agctctttgc cgagtgtttt atttttgaca 420
 ctcggcaa 428

<210> 826

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B2

<400> 826

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 cgccgtgccc gccaccgccg cggcgacgcc gaccgacgcc gccatcgacg aggcgtacgc 120
 gcatctcgtc aacctcaccg ctaaccagga gtactgggcg gagcgcgcg agggggcgca 180
 cgcgtaaac cgcgggcggt accagaccga ccccggtggc gtcgtgcagc gcttcaacga 240
 cggcggtcac agggcgacgg cgacgcggtc gcggtcgctg gcgcacaagg cgcggggccc 300
 ctgcacgggg accaacccca tcgaccagtg ctgggggtgc cgccgcgact gggcccgcga 360
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<210> 827

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B4

<400> 827

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 caggtcgtag ttgagcagca gcaaccactg cacaggatgt cgtggcagac gtacgtcgat 120

gagcacctca tgtgcgagat cgagggccac cacctgagct ctgccgccat agtcggccac 180
gacggcgccg tttgggcccc gagcaccgca ttcccacagt tcaagccaga ggagatgacc 240
aacatcatta aggacttcga cgagcctggg tttctggccc cgatcggcct cttccttggc 300
cccaccaagt acatgggtcat ccaaggcgag cccggcgctg tcatccgcgg gaagaaggga 360
tctggaggca taactgtgaa gaagaccgga caggcgctgg tgatcggcat ctacgacgag 420
cccatgaccc ctggacagtg c 441

<210> 828
<211> 426
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B5

<400> 828
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atcgaaaccg agcgtctcgt cagatatccc cagacttcca gcaaggtaca tagtaaaacc 180
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agggttgtcg gcgtccagcc tgaaggcgct gcctgtctaa attaccttat tcagtacgca 300
ctagccctgg ttctgaagga gagcttcaag atctactgct caattaacga tggcatcatc 360
aatctcgtcg atatgttctt cgaaatgccg aagtacgacg caatcaacgc tctggcgatt 420
tacaaa 426

<210> 829
<211> 419
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B6

<400> 829
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cgagggcctc gtcacctccc gctcgtcccc ctccatctac ctcgtcttcg agtacctcga 120
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gtgctacatg cggcagctgc tcgaggggct ggcgcactgc cagcgcgcgc gggatgatgca 240
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 ctccgggctg gtgaacctct tcgcgccggc gccggcgggc ccgctgacca gccgggtggt 360
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<210> 830

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B7

<400> 830

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 acgtatggcg gagcatgagg tcgcccgac tcgagctcgt ggggggcata tcagcattca 180
 ccgtggtcga agatcaagtg ctactatgcc gcagtatgct caaggaggct gtcgcagtac 240
 cggggcacgc gaggggtgcag gcacacggga catttcggtg cgcggaagaa tgactgagtg 300
 tcccactggc tggtagctca cagtggcaga gggtcaggat g 341

<210> 831

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B8

<400> 831

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 gcgtcaagtg cggcccaggc cacggcatca gcgtcggcag cctggggcgc tacaaggacg 180
 agaaggacgt ggaagacgtg caggtgacgg ggtgcacgat cgccggcacc acgaacggcc 240
 tgcgcatcaa gtcgtacgag gactccaagt cgtcgctcaa ggccagcaag ttctgtacg 300
 agggcatcac catggacaat gtctcctacc ccatcatcat cgaccagaag tactgcccc 360
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acatccacgg

430

<210> 832
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C12

<400> 832

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tgagagaggt tactcettca ccacctctgc tgaacgcgaa attgtaagag acatcaagga 180
aaagcttgca tatgtggctc ttgaatacga ccaggagctc gagaatgcca agagcagctc 240
atctgtggag aagagctacg agctgcctga tggtcagggtg atcaccattg gggcagagag 300
gttcagatgc cctgaggtcc tcttcagcc ttccttcatt ggtatggaag ctctggcat 360
ccatgagacc acctacaact ccacatgaa gtgcgatgtc gacatc 406

<210> 833
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C2

<400> 833

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actgcatttc catcgcccc gggacctcca aggtgaacat caccggcgtg acctgcggcc 120
ctggccacgg catcagcatc ggcagcctag ggcgggtacaa ggacgagaag gacgtcacgg 180
acatcaacgt caaggattgc actcttaaga agacgatgtt cggcgtccgc atcaaggcgt 240
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aggactcagc caaccccatc ttcacgcaca tgaagtactg cccaacaag ttgtgtactg 360
ccaacggcgc ctccaaggtc accgtcaatg atgtcacctt caagaacatc accggcacct 420
cctccacccc ggagggccgt tagcctgct 449

<210> 834

<211> 448
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C4

<400> 834

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caggaaccta cgttacaagg ctcacccgct tctccggcac actgtcctgc tgcacgggca 180
agccgtgctg aaggccggcc ggtgggcgtc agaggctgct tcttctagct catggcctgg 240
ccatgccagg tcgcgatggc tgcgtttcat ttcattggaag aaagcaagga tggatcacag 300
gttgtcgttc tgctaattaa tcgacgtttg ccttcaagta ctgtgttggtg gcattgttac 360
acatcacagt acagtttggc cttttttttt ccacagagga agtacggatt gatttaatcc 420
cacacgcgtg gtactacgta tacagttt 448

<210> 835
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C5

<400> 835

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caccgcctca tcttcttgga ctgcgccac tccttgtaac agggcctgta cgcccgagc 120
gtggcggacg cccgcattcg ccccgcgctc cgctgtctga agcagaacct gtcgttctctg 180
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ttcgaggcgt tcttgatggt gtcctggcg ggcggcaacg agcggagctt cgtgcgcgcc 300
gaccacgcca cgggtggagga ggacttccgg agcctgaggg gcgccttctc cacgtgcggg 360
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ggctcatgg 429

<210> 836
<211> 438
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C6

<400> 836

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gggctgagcg tgatcgtgag cgccgtgctc accagccgcg ccatcttcca gcgcatgaag 180
aactacacca tctacgccgt gtccatcacc atccgcacgc tgctgggctt cctgctcgtc 240
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gacggcacca tcatgaccat ctccaaggac cgcgtgaagc cgtcgccgac gcccgactcg 360
tggaagctca aggagatctt cgccacgggc atcgtgctag ggacctacat ggcgctcgcc 420
acggagctct tcttctac 438

<210> 837

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C7

<400> 837

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gccattgccg ccgccgcgct gactggggaa gatggttgct caggagttca cagttgatct 120
caacaagccc cttgttttcc aggttgcca tcttgaggaa cggtaccagg aatgggttca 180
ccaaccgacg gtcagcaagg aggtccacg ctttttcgga aatgatgtcc tggagttctt 240
gactcgacg aagtgggtgg ctgtgccaac tatatggctg cctgttgtct gctgcctgct 300
cgtgaaatct attctgatgg gtcataccgt tcatgacgta gctatgatgg ctctgtttgg 360
gatatttatt tggactctga tcgaatacac tttgcaccgc ttctgttcc acatcgagac 420
caagacctac tggt 434

<210> 838

<211> 132

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C8

<400> 838

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cgtcgaccag cgcgcgattg gcgacgctgg cctgactgag gaagacggct cgcaaatacgt 120
tcagaggtaa tg 132

<210> 839

<211> 176

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C9

<400> 839

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tagcgctggc gctgcagtac ctctccgtag actctactac agacgtgagc catggaccat 120
gtcgtcgcgt cgctgcagca gatcagtaat ccccatatag caccaaggat gccac 176

<210> 840

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D1

<400> 840

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ctgtcgctgc tggtcgccgt gctagcgggtg gccgccgatg tcgccaacgc cggccacgcc 120
aagcccctaa cgcctggcgg gcgcgtggta caccgacaacc acggcaagtt caccggccggg 180
ccgtggaaac ccgccacgc aaccttctac ggcgggctg acgggtccgg caccacggcg 240
ggcgcgtgcg ggtacaagga caccgcgcacg caggggtacg gcgtgcagac ggtggccgtg 300
agcactgtgc tggtcggtga cggcgcgggc tcgaggagggt gctacgaggt gcggtgctg 360
gacagcccta gcgggtgcaa gcccgacg 388

<210> 841

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D11

<400> 841

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ccggccgggc ttgtcgtacg tctccaatc cgttgacggg caggccctct agcttttgcg 120

cgggtgttctg gagacagagc gagagagaga gagagagaga gaggtagacg gagatggagt 180

gcctgctggg gctgctcaag gtgcgggtgg tgcgaggagt gcacctggca atctgcgacc 240

cgctcaccca cagcagcgac cctacgtcg tctccgcca cggaaagcag aaagtgaat 300

caagtataaa ataccgcagc attaaccagc aatggaacga ggagctcacc ctgtccatca 360

cgaacatgat gaaccgggtc aagattggac tctttcgaca cg 402

<210> 842

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D3

<400> 842

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tcgccgtgct agcgggtggc gccgatgtcg ccaacgccgg ccacgccaaag ccctaaccgc 120

ctggcggggcg cgtggtacac gacaaccacg gcaagttcac ggccggggccg tggaaacccg 180

cccacgcaac cttctacggc gggcgtgacg ggtccggcac cacggcgggc gcgtgcgggt 240

acaaggacac gcgcacgcag gggtagggcg tgcagacggg ggccgtgagc actgtgctgt 300

tcggtgacgg cgcggcctgc ggagggtgct acgaggtgcg gtgcgtggac agccctagcg 360

ggtgcaagcc cgacgcggca gcgctgggtg tgacggtgac cgacctgtgc 410

<210> 843

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D5

<400> 843

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cgaaaatgac ccgtgccagc agcagtagca gcagccggcg tgtgacgctg gtactgctcg 120
gtctccgcct gctgcttctg gttgggtgtt cgcaggcggt agtggagttg gtgcctgctg 180
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agtgcgcgac cccggtgagc gtggaggagg cgtgccgcgg cgcgtccgag acgcacgccg 300
gcgtggccta cgaccactgc atggcgctgc tgggcgccga cccgcgcagc aaggaggccg 360
gcaacaagaa catgcacggg ctggcgggtgc tggccaccag ga 402

<210> 844
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D6

<400> 844

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tctctgctcc tcgtctctgc cgtcgtcgcc accgtgcctc tactactccc ggcggtgtgc 120
atctcgcggc acgacaagtc cgagagcaag gctgacgaat aagctgctgc tactaccgtt 180
gccgccgacg agcatggctc tgtcaagacc atgtccctcg acgcatacgg gccactggag 240
atggccgccca agaagcccaa ggagcaggtc ctgaacgcgc aagctacgcc ggcgacgacc 300
gctggcgctg acacatatga ccagaaaccc gttgggtgaaa aacaggctga aacggccacg 360
gcctccgctg ccgatgaaca acccgacaaa tacggtggaa gctcctattc ctgac 415

<210> 845
<211> 355
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D7

<400> 845

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cagtcgaagt cacatccaca gcagagtcgg tcagttagaa aaggaaacca atcgattaat 120
cgagcagagc aggccggatc acgagaggga cttggcgacg ggggcagttg agaggaggcc 180

ggagagcaag ccgacgacga ggcgctgtt gtacgtggtc ggctcgttct gctgcacgtt 240
ctccctgtcg tcgacgaacg agtcgttctt gaacggcccg ccgaccagcg cgcccgtggc 300
gacattcggg ttgggctcgg gcgacttgag ccactcctgg ccgtcgcagc cggtg 355

<210> 846
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D8

<400> 846

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ctcctacggc gggggggcgc cttccggggg ctcgcgcgat gccccgcgc ggcctccga 120
gggccctgcg agcgccagcg gccgtctgg tgacgacgcg ccggcgctccg gtgctggtgc 180
cagcgcgctg gctgctgatg ctccggcggc ggcggcctca tccggtccct cgagcgcacc 240
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gagcgcccca gcaccatcgt ccggcgacga ttctgattcc aacgaccatg ggtcaacttg 360
agcctgaccg atgacgcagg tttgggttac cggtgccact caaa 404

<210> 847
<211> 347
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E1

<400> 847

cacgcgtccg gccgccgtca tcctatgcct atgcgtcgtc ctctcctgtg ccgcggctga 60
cgacccgaac ctccccgact acgtcatcca gggccgcgtg tactgcgaca cctgccgcgc 120
cgggttcgtg accaacgtca ccgagtacat cgcgggcgcc aaggtagaggc tggagtgcaa 180
gcacttcggc accggcaagc tcgagcgcg ccatcgacggg gtcaccgacg cgaccggcac 240
ctacacgatc gagctcaagg acagccacga cgaggacatc tgccagggtg tgctggtggc 300
cagcccgcgc aaggactgcg acgaggtcca ggcgctcagg gaccgcg 347

<210> 848

<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E12

<400> 848

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cctccccac ttcccgtagg cggaggctgg tcggcgtgca cgcgaccgcg gcggcggaga 120
tggaccggga cttctcgccc gggggcgggg ggcccagctt tgaattcgcc ttcaacgagg 180
tcaactttctc cgaccgggaa ttgcgtatcg aggtcgtcgc cggggatgac tacgtccggy 240
ggtccagcgg cgccggtgcc ggaggaggtg gcctcgccga ctgggcgcgc caccgcaagc 300
gccgccgtga ggagctcttc aaggagaaaag aatctacaac tcacatgtca gaccaaacia 360
attgcaatga agttgaagca gaagagtgtg atgcgtatga agaaaatcaa gaggaacctg 420
tagcaatggt 430

<210> 849
<211> 109
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E4

<400> 849

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tagcacaatg tgcaaaactt tttcataatg taagagagtt ctggcgtca 109

<210> 850
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E5

<400> 850

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ggcagaagtc ctatcaggat ctcatgaaca ccgtctaagc tctgccttag atggacacta 120
cgacgagaag aggaaatcca atgtggaata cacagaggac gagaagaaag ccgtgatcgc 180

ggctctgaaa aagaaggctt tgagcgctc acagaagttt aggcattcca tgaaaagggg 240
gaggaagagc agcaaggatga tgtccatctc gattctggat gagccgtgaa ccttgaggag 300
tgaaggcttt gatggctttc gccagcctct tgggtcttgaa gagctgctaa catcgagca 360
tgatgactac cacatgatgc taagatttct c 391

<210> 851
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E6

<400> 851

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aacatcatgg ggcaagcctc acggctcgtc ctctctcgcc tctgtggcgt gctgtccgcc 120
ggcctcctcc cgcaggcgtc gggtaagggg aggggaggca ggggacacgg tggcgccgtc 180
aaccgcgagg tcgccggcat ctgctctcgc acccgttcc cggagggtgtg cacgtccacc 240
gccggggcggc acgcgtccaa gtaccgcgtc atcgacaacc tggccgtgct gaacatgcag 300
gtggacgcgt tcgccaagcg caccgcgcag gcgcgcaagc acgtcgcgag gtcggccccg 360
accatccccg cgcagcagac gcatgcgctc acgttctgcg acaccatgta catgaacacg 420
c 421

<210> 852
<211> 413
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-005-Q1-E1-E7

<400> 852

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gtcaacgacg tctgtctcaa gaacatccac ggcacctcca acacgccgga ggccatcacg 120
ctcaactgcg ccaacaacct gccctgccag ggcgtgcagc tcatcaacgt cgacatcaag 180
tacaacaggt ccgacaacaa gaccatgtcc gtctgcaaga acgccatcgg caagtccatt 240
ggcatggcga aggagctcgc ctgcgtctga acctacttgc atccatcact cactcttcgt 300

cacctctctc tttctcactc tcgccagtct ttttttaggc ctctggcaat ctgcgaactt 360

tcttattcat tctactagtg tggatctata attccattca anatatatac atg 413

<210> 853

<211> 415

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-E8

<400> 853

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gacgactaat aagccctctc tctctctcgc cctggcggtcc gcgctccttg gtgcggcgcc 120

ggccgcccgc aacgcgcccgc gcgggcggtt cagcaactgg gtggcgatga accagcagag 180

ctacgcgtg tacgcgcaga agtccgtcgg ggacgggggc aaggagcccc tggacaagaa 240

gctgtcggag gcggagaaga agaatgtcac gtacgtggtg gaccccagcg gcaagggcga 300

ctacaccaac atcaccgcgg cgtgggagga tatcccgtg agcaacacca agcgcgtgat 360

cctggatctc aagcncggcg ctcaagtccg cgagaagctg ttctgaaca tcagc 415

<210> 854

<211> 87

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-E9

<400> 854

gtgagtcgta ttaancgtcn tnttcttcgc ttgttggtggc gctggtgctt gtcctgttgt 60

cgatgctggt cgtcctgcta tcggtgg 87

<210> 855

<211> 236

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F11

<400> 855

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 cgctgcccgc ggccaagctt ctgccctccc cggcgccggg ctcgggtctt cgtcggccag 120
 gcagctgcta cgcgtgaaca cggtcacacc agtaccacgt gacgtgaacg gtgaactcgt 180
 gaagaacaga gccgccactg aggaacccta gcgacggcgg cgtgctaccg gtgaca 236

<210> 856
 <211> 367
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F2

<400> 856

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 ggggctgttc caggcgctcg ccgtcgcgtc catgtgcttg caggaggacg ctgccagccg 120
 gccggggatc agcgacgtcg tctcggcgct ctcgttcctc gccgatccgc aatactacc 180
 tccccaaggc acgggagccg agcagaaggc cacagatcga gagagtaaac ccaacgacaa 240
 ttctacagac aaggatagca gtcctcataa ggccggaatg atcagggcag acgacgaaac 300
 gaagcataga tgatgaccgt agggggggaa cgctaacgac gggaattaaa agggaggaac 360
 actgcag 367

<210> 857
 <211> 366
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F3

<400> 857

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 aggtcgtggc cacgcacgcc gtcgcgccgg gctccgcgtg cgcgggtgaac ggcacgggtc 120
 acttcggtat agcgggtgctg ctgcccgaga cgcgcgccgc agcctcggcc gtgagggcca 180
 ggtggtgggc gtggacggtg ggtgtcggcg cgggtggggg gctgggagcc agcgcttga 240
 cgctctctgt gggcggcgcg gtgagctgga ccaggatgcc gcgaaggag gagatggatc 300
 ggcgggcgat ggccggggag gagctgggga ggatgaccgt gcgccggaac aagatgccat 360

cggcga

366

<210> 858

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F5

<400> 858

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ccacgccaaag cccctgacgc ctggcggggcg tgtggtacac gacaaccacg gcaagttcac 180

ggccggggccg tggaaacccg cccacgcgac cttctacggc gggcggggacg ggtccggcac 240

cacggcggggc gcgtgcgggt acaaggacac gcgcacgcag gggtagggcg tgcagacggt 300

ggccgtgagc acggtgctgt tcggtgacgg cacggcctgc ggcgggtgct acgacgtgcc 360

ggtccgtgga cagccctagc ggggtgcaagc ccgacgcggg gggacgggtg gtgacggtga 420

ccga 424

<210> 859

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F6

<400> 859

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tcgctccaca tggtagtctc tcacagcacc ttcaagtcaa agagtttgag catctggact 120

gggctgcgag gatgagggtc atcatgggcg tcgcatactg ctttcaatac atgcaccatg 180

agctcagtc acctatggcg atccacgacg tgcggtctga cacaaccttc atttcagatg 240

attatgctgc caagattgca gatgttggtg tatggaacga gcttgctgcc aaagcgaagg 300

ctggaaagga ggacggcagc agccgtgctg aagctcctcc ggatctccca agcaacgcct 360

actgcttcgg cgcgctcatg atcgagacca tatccgggag ggttcctgac ccgtatgatc 420

acaaacccat atgcagct 438

<210> 860
 <211> 382
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F7

<400> 860

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 tcaactccaca tggtagtctc tcacagcacc ttcacgtcaa agagtttgag catctggact 120
 gggctgcgac gatgagggtc atcatgggcg tcgcatactg ctttcaatac atgcaccatg 180
 agctcagtcc acctatggcg atccacgacg tgcggtctga cagaaccttc atttcagatg 240
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 ttggaaacga cgacggcagc accccgttct gaagctctc cggtctctcc attcagcgcc 360
 tactgcttcg gcgcgctcat ga 382

<210> 861
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F8

<400> 861

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 gcgcggccga ggccccggca gagtcaccga aggaaggcag tgctgccaag gcacctgagt 180
 ctgccaagag aactgctgcc cccgctgaag caccgaagc cgcattccacc cccgtcgccg 240
 ccgctgcccc atcgccgtcg tctaggaagt ctggtccagc taccgcgcca gccaccgcct 300
 ctacaccccc ttcttcacg gacgaggagt tgagcccttc cccgccagca tccaccgccc 360
 cggcgtcccc tgcggctgag ggaacggctg ctgatgactc cgccggtgct gctgcccttg 420
 gaagtggagc tgccatcgc 439

<210> 862
 <211> 257

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G1

<400> 862

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 aagaacagaa tccgcatact cgacagcgtc gacgactcgg ccggggacaa caacagctcc 180
 gacgcctcgg ccggggacaa cagcaccgac tccgagtcgg aatgccgcgt cgtcgattcc 240
 gacatgaagc tggctga 257

<210> 863
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G3

<400> 863

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 gcatcagcca tggcgatcgc ggcgcgcgtc ctgcgcgcc tcccgctcca cctctacccc 180
 tcgctcgtc gctctttctg cgcagtttcc ccggccgcc cctcggccgc cccggcgctc 240
 gcctcggccg ccccggcgtc cgccaaaggt cgcgatcgca tcgtgcgcgt cctccccatc 300
 gatctcgagg gggcgccccg cgaggtcgtc ggcctctccg ggcagacact cctccgcgcg 360
 ctcggaacg cggagctcac caagccgggc tcccaccggc tcgaggatat cgacg 415

<210> 864
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G5

<400> 864

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 cagtcctcca tcgaaatcgt ccctgtcacc accgccacca ccaaagaaaa gtggtagtag 120

gtctagctct aaagatggga agacgaagaa gtcgtcttca tcgtcttcat cgtcagataa 180
 tacagccgct gtgatcaccg gcgtgggtgct tgggggtgggtg ggcttcgctc tgctcttgtc 240
 catcgtggcg tgcgtgtgct ggcgaagaa gaagaagaaa cgtccgcccc caatgaacat 300
 gcccttctac accgacgaga aaggcaatgt gtattacccc aacgctgggtc tgccgcctat 360
 gtggcagcaa tatggcagca acggcagcat ccctccgccc ggatggcacc atc 413

<210> 865
 <211> 218
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G6

<400> 865

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 gtcttccagg gttcctgcat caatctatct ccagacacca aaggcaacaa tacatcgatc 120
 tttcaatact tccacctcca tcttcggcat ggccatcaga tctccttcat ccatcctcat 180
 ccacatcata ctcaagccaa ccgttagtaa atgatgtg 218

<210> 866
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G7

<400> 866

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 tgctcgccgc ggccggcgtg ctgaccacgg tgcccgccgt cgcgctcgcc aagtcgaagc 120
 tcgccaagaa gagcgacgac gtcgtgaacg ggcccctcct gaccgagaag atccaggcga 180
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 cgggtgcccgc cggcaacgcc gagtgggtca tcgtccacct ccgctctggc ctgcacaagg 300
 gcaaagttgt gataccggag aacaagccct tcattcttct gaagggaac ggcaaaggcc 360
 ggacctccat ctcccacgag tccgcctctt ccgacaacgc ggagtccgcc gcgttcaccg 420
 tgaac 425

<210> 867
 <211> 336
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-005-Q1-E1-G8

 <400> 867

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 agccggggcc ggatgccgcc accgcggcga actaggcgctc gttgtggctc cgcaagagct 180
 tcaggcagcg cgctgcccgc gctttccgcc gcaacatgtc gggcgtccgc gtcaggacgg 240
 tcacggacct cgcccaggaa cgggactcag tgcgcgccgt cagcaacaag gtctccgatg 300
 aagccgaggg cgctaccgcg gtgcccgcctg cagggtg 336

<210> 868
 <211> 380
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-005-Q1-E1-H1

 <400> 868

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 accgccgcgg cgccccctgc ggctgagggc ccggtctgtg atgactccgc cgggtctgct 120
 gcccttgaa gtggagctgc catcgccggc gttgccgctg ctgttgctac catgatcttc 180
 ttctactaaa ctcaccgacg atggctcgtg cgcggtgaga cattaggggtg gacacgtaat 240
 tggctgtgct gtaatcgctc tcgtctggtg gggagggagg gaccaagtgt ttctttgctt 300
 tgctcacttc gtttgctctt gtaacattat ggggtcaacc gttatgtaac taatggattt 360
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<210> 869
 <211> 457
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-H2

<400> 869

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cggagctaca gggtgaccgt ggacgcgccg agaaagccgg agctggcgcc gcgaggggtac 180
tacctgttgt tcgtgggtggc gaagggcggtg ccgagcatgg gtgcgtgggt gaaggtccgg 240
tgagatcgat cagctcacat ccaccgtgtg ggtcgtgtcg ggatcgtgta cacaagtggg 300
gagccagcct aactctctct ctctctctct gtgtgtgtct ctttgcgttc tttggttttg 360
ttttcctgct anggatggat ggatgtaa at aggatcgatc agattggcca gttcaccgct 420
ggatcactct nataggttga ttggatacct gccaca 457

<210> 870

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H3

<400> 870

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cgaagagacc ccagccagtc gatcgttcaa gaaaaatacc agcttagcag caacagcagc 120
agcaagccca cccgttcgac gacatggccc gcctcggcgc cggcgccgtg ttggcgctcc 180
tattggcggg cgcggcgggt gccgcgttcc tcgcggtgcc ggctcggcg aagtccgggg 240
aagctaacc caaggggggt gtgggcggca aaggccggaa ccgcgccgc cgcacaaaat 300
tctcgggcgc ggtgggcgaa tgcgacgttg acgatgcgga ggagctcggg ctgagcggcg 360
gcggcctcgg c 371

<210> 871

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H4

<400> 871

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cagcgatcca ttctcgtagg ggggagagag agagagagag agagggagag aaatcaaaga 120
ggagagtgat catggagcat gtgatcggag ggaagtataa gcttgggagg aagattggga 180
gcggatcctt cggagagcta tatctcgtg ttaatatata gaatggagag gaagtgggaa 240
taaaattggt gcctgtgaaa aaaaaacatc cacagctgca ctatgaatct aaagtttata 300
tgctgctgca cgggtggaaac ggtatccac acctcaagtg gtatgggggtt gacggggagt 360
acaatgttat ggtga 375

<210> 872
<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H5

<400> 872

cccgggtcga cccacacgtc cagcggttcg aaacagaact acctccctcc gctgccgccg 60
ctgacgaggt gcaaccaaga ctccggcttc ttccgactgt ggaagaaggc ggcgctgccg 120
acgtgccagg cgcgcgccga tgccaccccg cgcggcggcc gcggttcgca ccacgtcccg 180
cggccgtcca tcagccgggg cacgcagcgg ctctacgtcc gcctcaacac gctccactac 240
gtgctgaccc acctggaggc cctcgacagc tcgctgtcgt cctcgacctc t 291

<210> 873
<211> 358
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H7

<400> 873

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aaaaaaaaa aagggaagaa aaaaaaaaaa gaaaaaaaga ggaaaaaaaa agaaaaaaaa 120
gaagaaggaa agaacgaaga aaaaaagagg ggagaggaaa gagcgaaaga aagaaagggtg 180
gggggggagg ggtggggggg aggagctttt ccggggggtt ggtgtcccc gtgtgtgaga 240
cgtcgggggg ggggggttgtt ggaggggggg ttccgggggg ggcggcgggg gttttggggg 300

ggagagtttg tggccgggtg cctctgggct ggtgtttttg ggggggggtg gcggcgcg 358

<210> 874
<211> 455
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H8

<400> 874

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ggacgcgtgg gttcgtcccc gcgtggagaa cgagagacag aaacagggga gcgccccccc 120
actcctcttc gctgccaaga aaccaccatt cctaacggat ttctaccag tcttcttttag 180
gatttccgat tcggttctcc ggtgagaggg tgggaatttt attttcctcc gctgcaaccg 240
gtgcaaacat ttogaatccc tccattgcat tcctctcgt gcaatcgggc attcatatgt 300
tccttggctg cattgaggca tcggtactcg aattttgatg tgagctgacc agacatggct 360
gcgagagact gctcgggatc acaggatctg ggggggcaca cgttctggcc catgctgtcc 420
tacgcttgcc gcgagctgtg tgtgatcgta ctgcg 455

<210> 875
<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H9

<400> 875

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agctgagaag aatcctagct gccacgagag tgaagtatcc aaggccaatg ttcattgatag 120
cgttctaatag acagagcaaa gtgagcgaga gcataatcaa tgcgaagggt aatttgcaaa 180
cagtcatgtc ccaggaagcc ctgtcactat tccggtcacc gtgtccacta ttgacgggaa 240
ctctagcaac agtcccaaga agcctgattc tgctgagggt tttctatgat atgttattgt 300
aaatctagat tgggggtgat gatgatagtt catttcagct ctttctattg gatctgtcat 360
ccttcttgca taaatagttt tgttcagctc ttcagctaaa tttttcaccc tttagtgttg 420
ctttcgggca 430

<210> 876
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A12

<400> 876

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ccacgcgtcc actttttttt tttttttgaa tgcaacatcg gtttccacca ttttcctctt 60
tacagaatac tactgctccg tgtatacgga gaaactacat ttcacggagt agtaaataaa 120
cagggattaa ttagcgccgt gtgcatgcat gcatacggcg ttgggctggc cgacatgac 180
ataacaatta attaattaat taaggcgaag acacgaagcg tggaggatcg atgcgtcccc 240
gccgccgcag tatgttttaa gctgacttgc ggtagatgtg ttgtggcctg ccggcggcgg 300
cgtccttctg ggtgtctatg acagtctcga aggcgccgac gagcgccttg accctgctgc 360
actggcgctt ctgcatcagc ttggtgcgtg ccgcctcga 399
```

<210> 877
 <211> 360
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A2

<400> 877

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cgggccagaa ttcacgggtc gagccacgcg tccgcggaca cgtggggcgc cgctggccaa 60
gcccggcgcc aagggcggcc aggcgggtggc ggtgcggctg ttcgggacca agacgcagat 120
ctacaactgc accatcgacg gcggacagga cacgctgtac gaccacaagg gcctgcacta 180
cttcaagggc tgcctcatcc ggggcagcgt cgacttcacg ttcggcttcg gccgcagctt 240
ctacgaggac tgccgcatcg agtcgggtggc caaggaggtg gcggtgctga cggcgcagca 300
gcgttccaag tccatcgagg gcgccatcga caccggcttc tcgttcaaga actgcagcat 360
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<210> 878
 <211> 281
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A3

<400> 878

gtccccgggac gactcacgcg tcagcacagc aatcaacggc ccgcggtagc aaccaagatc 60
ctctccaatc gcctcccttc gccaaagtcc acggcggtga acctggaaac gggaaaaaaaa 120
tattccgcac aaagtgcgcg cagtgcctaaa ccgtggatcg aggtagggtcg cacacgcagg 180
gacccaacct gcactgcctc ttcggtcgtc agtcaggcac caccctcggc tatgcctact 240
ccacggccaa caagaacatg gccgtcgtct gggaagaggg c 281

<210> 879

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H6

<400> 879

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caggatccag tgcaaggcca agtgcaccga gcagaagggc atcacggcgc cggccatgaa 120
ggctctgccag gaggagtgcg acaaggcgta cgtggtgaag gcggccgagg tcaccaaggc 180
ctgcagcgtc acctgcgcca aggagaagaa cccgcgcctc agcgagaact gcaagaggtc 240
ctgcacccct cctccttctt gaagcgaagc cccttgaaat gaatgaacca tgcattgcatt 300
catgcatgta tgcattgcgc ggggtgacgt ggcgttcagc tcaggcgctg agcgagtcta 360
tacgtacgtc gtcaccggct ggccacgcat gcgataacca tctgatattg acggaactat 420
ata 423

<210> 880

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H8

<400> 880

acgcatccga ttctaaatcg cggttcactc actattgctt ggtatgttta tgcaaatatg 60
ggtttcggaa atcctctggc aactgttaca gaaggagtgc tccagcacat ccaaagctcg 120
ctgtttcctt ccattttaac gaagctcccg taaagctcca cttaggccgg attgtcatca 180

atggctatat ttatgacagg gatcgtgcc a gctacactgg gactgtagaa ggcataaggc 240
cacagacagt cgcgatcggg tcaaggtccc agtcgtccgc acagggctac gccgatcgat 300
gtcacattac actgtcaacc gatcgtatag acgactgggc attctacggg agttaccaag 360
ttactaatta cccgcatgag tcttcaactg tcgatgatgg actcgccga 409

<210> 881

<211> 316

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H4

<400> 881

gtccgagcac atacacgac gagctcaagg acagccacga ggaggacatc tgcgaggtgg 60
tcttggtgga gagcccgccg aaggactgag accaggtgca ggcggacagg gaccgcgccg 120
gcgtcctgct caccaggaac gtcggcatca gcgacaacct gcgccccgcc aaccgcctcg 180
gtacacctca ggacctgccg ctgcccattc gcgcctcgtt gctcaaacag ttggactcgg 240
acgacgacga cgatcagtaa tagcacatcg acgacgacga tcgatatgta atagcacgtc 300
gtcgacgacc gaccgc 316

<210> 882

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G10

<400> 882

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aagtacctta gttaagtttt gtaacaagga tatttgatca gtgcatgtca aaggagggtg 120
tcaaaccaac gtgtcatatg actgtctagc ttatgaatgt tgctcctgtt ttatcacccc 180
tgaaggccaa gcacacaatc atcctttatt gatgggtcac actggaaact tgagccagcg 240
tgatcacaca atcgatatac caatgagtga tggatgacc gcatcaacat ctaccagga 300
tgatcatagt ggctcggatg agctgcatcg cagcagaggt ccttcgaatg aagtttcacc 360
aagcccagat acatcttccg gtacaaacga tgtatccaac tctc 404

<210> 883
 <211> 449
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G4

<400> 883

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acgcgtccga atttctccta gaaggtcgag aggagaagaa ggcgagacgt gcagtccgtc   60
gggctccgat cgagaacagg gaagcaagag gctgctagag atcgagctca tcaaccaatc  120
aagtcgtacg tcgtcagcat cacgcgaccg gatggcgcg cccgcgtcca gctatgtatc  180
caggaggggg ctctccgcag cgatgacggg ggcggaggac tccgtgaaga aggtggagga  240
caaggcgggtg aagctgggaa ctgtggccaa ggacatcgcc agcgccatgg ccaccacgac  300
ggaggagaag acggcgttct gggaacctga ccccgagacc ggatactacc gtccggtcac  360
cggcacgaag gaggtggacg ccgccgacct gcgcgccgag atgctcaagc gggggattct  420
gcaggacgac tgatgcatgc aacatgcac                                     449
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<210> 884
 <211> 350
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E3

<400> 884

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gcgtccgaag agaaccagca gcctccaata agagccagcc agagaaacta ataaaactct   60
caccgccgcc atccgagaga acaagccaac cgaccccgtc cccaaggcaa tccgtcgccg  120
acgtaccagc gccaccgcag gagcgagatg gagatgaaga ggatcctctt cgccgtcctc  180
gtcgtcatcg ccgcctcggc caccgcagtg ctggcctcca ccgaggccgc cgccgcgggc  240
gccccaaactg cctccgagtc gtccgccgag gctcccgtg gcgctggcgc tggcgctgcc  300
gctggcgccg ccgcccgggg gccctccgcc agcagcgggc ggcccgcctt                                     350
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<210> 885
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E4

<400> 885

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ggatcagtgg cggcttggtc gagatgggcg atgcgggtga tgacatcatc tgtgcaacgg 120
atgcggcggt cgccgtcgag gatgcggcca gtgggaagcc cgcaatgctc tctagcttag 180
gggggacagg tgaggaagag catgaggaga aggacaatga ggacaagtca ggcgagagcg 240
aggtgatcaa cccgccagaa gacgctggcg gggaggccac ctcaccctg gaagggtga 300
agcctcgctt ttccaagggg aatcaaagcc atggacctaa tgctgtcaaa tcaaagagcc 360
caacgagtgg agacgaaggt cagacgagga aaaaggctcc caattcttct cttcctaaag 420
caccca 426

<210> 886

<211> 267

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E6

<400> 886

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tctctatggc ataccctttc ccgtaggta cggggggggtc cacatttttc ctcaataaat 120
tatcgctctt ctcccagact cttcatctac gcaatggatt ccaactccgg attaaacct 180
ctcatccctt cttacattac ccaaacaac cagatcaaag gctgctccct ctgctaataa 240
ctcattctac tcttcccat cccttac 267

<210> 887

<211> 272

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F1

<400> 887

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ctgggtggccg ccaggccagc agtggctgcc gatattctca aatccggcca tgcaaaccc 120

ctgacatctg gaggggtgcct ggtacaggac aaggacagaa agttcacagc cggggcatgg 180
aaaccagcca atccaacatt ctacggagga cgggacggat cagggaccac ggcgaggacg 240
tgagggtaaa aggacacgcg cgcacaaggg ta 272

<210> 888
<211> 325
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F7

<400> 888

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aacgccggac agacgaagcg cctaactcct ggtgggcgcg tagcatagga caacgagagg 120
ggggttacgg cggggccgtg gaaacctgtc gaatcctcct tctgaggaag gcgtagccga 180
tccggcagca ggcgggccgc atgcgggtat aacgacaccc gcactcacgg gtaacgcttt 240
caatcagtga cccctcacca ctgtgctgtt cggtgactgg cgcagcctgc ggatgttcct 300
accatgtgcg atgcttgac agccc 325

<210> 889
<211> 336
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E2

<400> 889

gcgtccgaaa cgacgtggac ctggcgaca acgtgacggt gccaggttg acggtggaga 60
tggccggtgg cgcgaggcta gagccggaag ccaagagcgt ggtgatgccg gatgtagtac 120
ccgggtgcgc gtgcctggcc tttaggaagc tgccgcgggg agggcccggg atcttgggca 180
aagtgtcat gcaggagtac atctgggaga tcgaccaccg tcagggaag atgaggttca 240
ggaaggcgaa gtggaggacc catcatctcc aaaccagctc acgctgagac gtctatcata 300
attagaatgg catttctctc actactgtcg tgcagc 336

<210> 890
<211> 407
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D7

<400> 890

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ctcccaaagt cccccaggc aagaacatca cggccaccta tggcaaggac tggctggacg 120
ctaaagcgac atggtatggc aagccgacgg gtgccgggtcc cgacgataac ggtggcggtc 180
gcggtgtacaa ggacgtgaac aagccccctt tcaatagcat gggcgcatgc ggcaacatcc 240
ccatcttcaa ggatggtctg ggttgtgggt cctgcttcga gatcaagtgc gataagcctg 300
tgggtgtgctc cggcaagccc gtggtggtgc acatcacgga catgaactat gaggctatcg 360
cggcgtagca cttcgattta gcaggcacgg cgttcggccc catggcc 407

<210> 891

<211> 368

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D9

<400> 891

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gtggcgctgg ccgcggaggc gccggctccg tctccacca gcggctcctc cgcggtcgca 120
cccgccatcg tcggggccgc cgtggcctcc ttcttcgcgt actacattca ctgagccgcc 180
ggacgaggag ccggagccgg agggaagaga ccaaggtggg gggagagact tggctgcgct 240
gcgctgctct gctgctcccg cgcattcccg atgcgtgggc gtgctctgat tgggcacggc 300
ggtggcagtg gcacaccttc gtcttccttt tgtttgtttt ttttccttcc tctttctact 360
tgattttc 368

<210> 892

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C9

<400> 892

ggggtcgagca cgcgtccatc accatccgcc tcaactaccga gggaggcacc aagtcctgtc 60
 acgacgatgt catccctgcc aactggaagg ccaacaccgc ctacaccgcc aaataattaa 120
 ctttagtgct gacaatactt taagccggcc tatgctagct atactagaat tggttggatc 180
 ccaagcaatg cattacacat gcatgcattg gaccgtgata tctatttgct accactaccc 240
 tattacgaca gtgatgctgg cgccaacaat gatgggtgtca tctccttctt ccatcttctt 300
 catctccata tatagctaga gtgagacttc gctgttggtt aaaagagaag agttaagaaa 360
 tggattgaca agttaaaaaa aaaaaaaaaa aaaaaaaaag aaaaaaaaaa aaaaaagaaa 420
 aggaaaagaa aaaaaaggaa aggagaacag 450

<210> 893
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B12

<400> 893

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 atccagtga agggcaagtg caccgagcag aagggcacga cggcgccggc catgaaggtc 120
 tgccaggagg agtgcgacaa ggcgtacgtg gtgaaggcgg ccgaggtcac caaggcctgc 180
 agcgtcacct gcgccaagga gaagaacccg cgctcagcg agaactgcaa gaggtcctgc 240
 accctctctc cttcttgaag cgaagcccct tgaaatgaat gaaccatgca tgcattcatg 300
 catgtatgca tgcgcccggg tgacgtggcg ttcagctcag gcgctgagcg agtctatacg 360
 tacgtcgtca ccggtggcc acgcatgca taacca 396

<210> 894
 <211> 73
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B3

<400> 894

acgctccgc acacgctcc gccacgct ccgaaaaaa aaaaaaaaaa aaaaaaaaaa 60
 aaggaggaag cac 73

<210> 895
 <211> 303
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B7

<400> 895

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 ctcccatcac tctcctacta taaaaactca cgtccgcctc catgaaagtt ttctcctttt 120
 ctatgtgttg ggggtgggttc ccctctccac atctgttttt acgacttcat gaccaggtc 180
 caacgtgatc tctgctaacc actgtgccta tgcaccctta ccccgactac agacttcaca 240
 tcccactaac cacttgatgc ccctatctca tctgcctatc catgcatcca ttgcattgct 300
 tct 303

<210> 896
 <211> 263
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B8

<400> 896

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 ttactccaca taaatatgga ggacttcac atcacgttca atgacatcac tgctaatacag 180
 gtaccttag acccttactt cgatcacaca cttcacatcc catgacttat ttattgctcc 240
 tatatcattt gtctatccat tca 263

<210> 897
 <211> 359
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-066-Q2-E1-B9

<400> 897

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aggccaacag cagtggaggt tttgcagcat cctttctttc agccatgctt ctatgtccca 120
 ccttcacttc gcttcaaate tactggatat gcatcaacgc caccatcagc tggggctaaa 180
 ggagctgttg atcagaagaa cattaggaga tactacatgg gtactgtacc caatgcgagg 240
 ccaacagtta attactcgta cttgagaaac aatgctcctg caagagcagt tgggtgcacan 300
 aggaaattgg agttggatta tcagctccca gagactaata accataataa ggtgacaaa 359

<210> 898
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C1

<400> 898

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 gaaaataatg aagagccgca gcatggcatc atcgcccgcg ctcttggtgc tagccctcgc 120
 gctagtggcg gccaccgccc cacaggtagc ggaggcaaag aagaagagag cggcggagag 180
 cggcgaggcg gcggaggcga agaagatcca ggacgacttc tgctcgacgc tgtgcgaggg 240
 caagaagggg acggacctgg tcgtgtgcaa ggagtctcgc gcgctctccc agcagtccaa 300
 cctggtgctg tacggcagga tccagtgcaa gggcaagtgc accgagcaga agggcatcac 360
 ggcgccggcc atgaaggtct gccaggagga gtgcgacaag gcgtacgtgg tga 413

<210> 899
 <211> 373
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C11

<400> 899

gagcacgcgt ccgcccacac gtccggcgag tcgctgacgt tccgggtgat gaccagcgac 60
 caccgcaagg ccacctcatg gcacgttctc cccgctgact ggaagttcgg cgtcacgtac 120
 caggcatcca agaacttcta agtagccact ttccctctc ttcttcatcc tgcataatgcc 180
 cacaagcaac catgcaaattg ataacatgca tcatgcatgc atattcattc tttcgctcat 240
 gcactccaat atggtgccgg agttaaaaa atgtaaatca atgtgcaaac tcaaatgaca 300

tcttaaccag ttgtgatcaa tctcaaccgc taatgcattg cacacaccga atgaagctac 360
catccactgc tgg 373

<210> 900
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C4

<400> 900

gggtccggcc cgcgtccgga tttatcaagg caagaaagtt tgatatcgag aaggcaaagc 60
aaatgtggtc tgatatgctg aagtggagaa aggagttcgg tgcagatacc attctcgagg 120
aattcgaatt cgaagaagct gataagggtgg cagaatgcta ccctcaaggt taccatgggg 180
ttgataagga aggcaggcct gtctactttg aacggcttgg acagatcgat gtgaatacgc 240
taatgcaggc cactacaatg gatcgctttg tcaagaacca tgtcaaggag ttcgagaaga 300
actttgctgt taagttccca gcttgcctca tgcgcgcgaa ccaccatatt gaccagagca 360
caacaattct tgacgtgcaa ggagtgggga tgaagcagtt cagtaaagct gcaaggggagc 420
tcattgggat gc 432

<210> 901
<211> 327
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A11

<400> 901

ttcctactac tttttcaact acgattcctc aagtatttcc ttttttcagt cacattgttc 60
aatagacata cattttatta aatatgcagg gcatcgtaga agagaatggc tctcccttcc 120
aaaaagcaaa acaaaagaaa ctcgtatagt cgatcgacga ccatgcatca catttccttt 180
tcctcgatct tctcttattt ccgcagaaaa acaacgaagg aaaccaacc aaggaaacgc 240
atgctattgc ttaagcatcg ccggaggagc tggtcgatcg ctcgctcact cacgggcctg 300
attgttccgg tcacctgtcg tcgtcct 327

<210> 902
 <211> 404
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-A12

 <400> 902

 atgccaaagg cctcgtgcct tctcttcctc cctggcatgg aggaagtagc tgtttcgcct 60
 atgategttg ccgccgtagt gctggacaac aatggcgccg acgcggtctc ctgcactgcc 120
 atccctagcg taacaataag cctagaggag aaagaaaata tcaatgggga tgttcccacg 180
 atcacctcgg ccgcaagcaa cgaggaggag gcgttggtca gtgtcggaga atccaccaag 240
 gacgatggcc atcgcttgac gatggaatgc accactcccg tctcctccag tagcccttcc 300
 actcgcaaga agcgcggggc gttcagcctc ttcacggcga tgttcctgtc cttcgggccgg 360
 agcgacgaca gcattaagaa gacagaccac gataccacga gccc 404

<210> 903
 <211> 406
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-066-Q2-E1-A2

 <400> 903

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 ctcaccacca ccaactgtga agtcttctcc accaccggca ccagtcagct caccaccagc 120
 gacacctaag ttgtcacctc cacctgctcc tgtgaacttg ccacctccag aagtaaagtc 180
 ttctccacca gcgacaccag ttagctcgcc accgccagcg cctaagtcac cacctccacc 240
 tgetcccatg agctcgccac cacctccaga ggtgaagtct cctccaccac cagctccagt 300
 tagctcgctt ccacctccag tcaagtcgcc acctccacc gccctgtga gctcanctcc 360
 cccccctgtg aagtctccac catcaacggc accggtcagc tcacca 406

<210> 904
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A3

<400> 904

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cgggtcccgcc cacgtcgtcg accacgtcgt ccaccgggaa cttgaccggg tacctgtgga 120
atacgccgtg ccacatccgg agccccatct cgacgaccac ctcgacgacc cccacgtgca 180
cctacaccgg cacctacagg gacagcgaca gggagtgggt caaggggagg atccccgatcc 240
ggacgctgat ccagtcggtc gtcccgtcct acatgacctg ctacacgacc agcctgacgc 300
ggaccatgtc cgcgatcaac tgcgtcaggt accgcttcgg gtcctcagac ccctggacag 360
tctcccgcaa cgtctagccc cagcagcaca gccgcctctt cagcgcgggc atcaccgtcg 420
gcacgaccat ccg 433

<210> 905

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A6

<400> 905

cccacgcgac cgaggacgcg tgggctagtg cacaacaaaa gcaagcctca gtagaccctt 60
ttgacttcgg tactcagaca cagcagtcca caacactccc ctttgatttg agcaccagg 120
caaagcagcc aggatcagtt tctcatgtta cagcagctac aatcccacct gcgcaaccac 180
aaccatcact acaatctctt gcggctagtt caggacctaa aatttctggc tcatgtgtcc 240
ctgtcgacat tgagtggcct cctcgaagaa gctcgtcadc cagcttcaat gcacgcttgt 300
ctattagcaa ggataatggt tctggaaggc tgtctagcga tggcgttgat gatattgatc 360
cttttgctga ttgggcccc aatacctaaca atgttaatag catttcagca accgagcatt 420
ggccaagcat 430

<210> 906

<211> 281

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B1

<400> 906

ggtagctgca cccggacatg gtgtcggcag gggctccctc tgaacacgga cacttcctcc 60

ggagacagct ttttgggtgg gtccttgccg catctcatga atgatcgctg acaatcctga 120

cgaagtcggt tgaccttcac gtcacacagt ttgagcacga gtcaatagat ggtggacaat 180

gactcaggaa ttctttacac taggatacta aatcgcgggc tgatgcatcg tggcctgcct 240

ctaacaccaa tgcttactcc attgccggac aacaaaaact c 281

<210> 907

<211> 354

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-066-Q1-E1-H12

<400> 907

tccgcggacg cgtaggcgga gatggagatt cccgaggagt atatcgagtc cctgccgaag 60

aacggagggtc attcttggag actccatgta caagatcata accgacgacg tcttcgaccc 120

caacgagctc ctgcagtcgg tggacctgtc gacggagcac aagatcgtgg acctcaagga 180

ccggatcgag gcctccgtcg tcatctggca ccggaagatc agcaacaagc tctcgtgggg 240

gcccgcgggc gtcagcctgg agaagcggga ggagtctgag gagcggggcg agancgccct 300

gtcctcctc aagcacaggt tcccggcatc cctcagtcgg cgctcgacat cagc 354

<210> 908

<211> 198

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-A10

<400> 908

cgcgacggtc tctgctacgc ctacacgatt gaaggcatcg tctgagcacg ctccctttgg 60

gctatctcgg ttcacaattc ccgtccagaa gacgacgatt agtcagtcgg cagctaggtt 120

cgcacgcgca aggccacgat tgatggcgtc ttcaagtcgg agatcacgac actggagatt 180

ccaggcaagc gtagcatc 198

<210> 909
 <211> 125
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-A12

<400> 909

gacgggctcg tgccttctct tcctccctga aatggaagaa gtagctgttt cgcccatgat 60
 cattgtcgcg gtagtgctgg agcacaacgg ttcctatgcg gtcgcctgca atgccatacc 120
 tagcg 125

<210> 910
 <211> 277
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-B10

<400> 910

atgttcatgc gtcctgtgcg cgcccatctt cttcagaggc tcagtgttc cggggagatc 60
 atccacgac acgcttagct cgcacgccat gtgctcgtag gtgacgatac cgcggatcac 120
 tctgtgtcag gtcacacac aggcatttga cccatccaga ttattcttgc gtcacatc 180
 atgcttcgcg acggccttca tcgcaagatg gggaaggcgg acagacatcg cctccgtgtt 240
 ggctccgacg gtgcaattgg gtccacacac gcgggtg 277

<210> 911
 <211> 110
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-C11

<400> 911

gagtcgctga cgttccgggt gatgaccacc gaccagcgca gggcgacctc atgggatatt 60
 ctcgcggctg acaggaagtt cggcgtcacg taccacgcaa ccaggacctt 110

<210> 912
 <211> 310
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-C12

<400> 912

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ttttccgaca ttcacagggg ggacaggaaa tcagtggcca tggcctcgat tccggcgacg 120
accttcgccg tcattctatc gtcctcttcc ggtgccgcgg ctggcaccgc cgtctataac 180
gacctccccg actatgtcat tcagcgccgc gtctattgcg acacctgccg cgccgggttc 240
gtgaccaatg tcaccgagta catcggcggg ggccaagggt agggctggag ttcaagcaac 300
ttcggcaccg 310

<210> 913

<211> 226

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-D9

<400> 913

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tagctgcttc ttcgggtaca ggctgtgggt ccatcgctca gtcaccctgt ctcaaagctc 120
ccgtccccca gctggcgctc tagagaacct ggctgattcg ctacttggt caaagatctt 180
cgcagtctca atcgacagtg cgccgcgcct tttccttgcg catta 226

<210> 914

<211> 89

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-E10

<400> 914

gacgatgagg ccacagctgc atagcctcgt cgcgctggtc ctctggcca cggtcatacc 60
cgccgctccc ggcgttggtt ttgtcgtca 89

<210> 915

<211> 104

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-E9

<400> 915

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ggcaactgat ttttccacac caagtgctaa cgctcggctt gtgt 104

<210> 916

<211> 345

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-F10

<400> 916

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ccccaagaag agagccatcg cggctgtctga tgacgattgc aagcctgccg atgacgagtc 120
aacgtcgtgg aagcgctcgc tggacggtat ggcgccgctc cgctccgcg ggcagctgga 180
gtactaccgc ccgccaccgc cgccaccgcc gctgggccac gccgatgtgt accatgacgt 240
gatcctcccg ccgccgtcgc aggcacggtt cggcttcgag atcaaggaag ttggcatgac 300
cagccgctac gcgttcgctg aggatctgca ccagatggac agcga 345

<210> 917

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-F9

<400> 917

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gcactggtac cacttcaccg ccatcgtggt cgccggcatg gggttcttca ccgacgccta 120
cgacctcttc tgcattctcc tcgtgactaa gctcctcggc cgcattccact acaccgtgga 180
ggggtcgca acgcccggca gcctcacgcc gcacatgtcc gcgtccgtca acggcgtggt 240
cttcgtgggc acgctgtcag ggcagctctt cctcggcccg cagggcgaaa agctcgggcy 300
caagaagggt cagggcatgc cgcccatgcc cagggctctc agtttccgct ccgtcggggc 360
c 361

<210> 918
 <211> 340
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q1-E1-G1

 <400> 918

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 gcgtggggcg caacgacggc ggcgtcgtcg cgggctcgt ggctgtggg atcgtgatgg 120
 ggaccatgtc caacgccaac aacctgatgc aggacctcaa gacgggttac ctgacgtga 180
 cctcgccgca caccgtgttc atcagccagg ccatcggcac ggcgtccgg tgcgtccgtc 240
 aaccggtcat gttctgggct tctacagggg ggtgcagaac ggcgacaccg acgtcttcga 300
 cgcgccttac gcccgagtgt accgcagcat cgccatgctg 340

<210> 919
 <211> 363
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q1-E1-G11

 <400> 919

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 ggtgctcctc ctcggtgcgt gccccgagta cggctgcctc gtgtacgagt acatggagca 120
 cggcagcctc gaggaccggc tgttccgtcg gggcggcacg ccgccgatcc cgtggggcgca 180
 gcggttccgg atcgcggcgg agatcgcgac ggcgtgctg ttctgcacc agacaaagcc 240
 ggagccgctg gtgcaccggg acctgaagcc ggccaacatc ctgctggacc gcaactacgt 300
 gagcaagatc agcgacgtcg ggctggcgcg tctggtgccg ccgtcggtgg cggacagcgt 360
 gac 363

<210> 920
 <211> 284
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q1-E1-G9

<400> 920

ggcacaagaa cacattatgg agctgatatt ccgtgagata ttgggatatc atccacaact 60

gctcaacgac tatatcaatg gcaccgcgag gacaaccttt ctgtacccaa gtgctgtcga 120

ccaatttagg aagcaatttg ctcatcttga agaacatagt gggaacggac ctgtgattcc 180

aatggaaaga aaccatactt ctcttcctag gtctactagt gttcactcat cctcaattcc 240

tgtcaaggga caaccccgta tcggcccatg ttcggaaagg cctt 284

<210> 921

<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H1

<400> 921

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gctcgaggaa gttcttggct ggaggttttg tctttacgga gacttcctgg tcctctcttt 120

tgtcaactgc acttgaggat caaccacac ttagtgactg ccttgccctgg tcccatgctg 180

tcagacatta gagttgcccc gtgattacac tattacagtg cagctgtagc acatttattt 240

gagcatggtg gatctgtttc tctggcaaca ttccagtaat 280

<210> 922

<211> 166

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-F7

<400> 922

accacgcgtc gggccgtacg agaanccttc tgccctctcc aactttctcc ctttctgccc 60

aaggcaaaac accttcgccg gcgaaaacat ggcgatggcg tgacgtgtcc tggagggtcta 120

actgatgtct cgcaaattac ctcaagaaag tgtctctctt ctcccc 166

<210> 923

<211> 204

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-F8

<400> 923

caggaagacg gcaggagtat gcgcacgtga cggggtgctc ggcaacggcg gtgcgagcca 60

cctgcgtgga cgggacgcgt cgcctctgcc atatccgggg caagatgcac aagaaggtgt 120

ggatcncggg cggggacatc gtcctcgtcg ggctccgca ctaccaggac gacagtgccg 180

acgtcatcct caagtacatg aacg 204

<210> 924

<211> 73

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-G10

<400> 924

aaaaaaaaa taaaataaaa aaaaaaaaaa aaaaaaaaaa aaaaataaaa aaataaatta 60

tggataaaag aaa 73

<210> 925

<211> 295

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-G2

<400> 925

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ccataaaaca gagacgaact tgtgtaggct cactgcagca gagaggaatg aaacgatact 120

gaaccacgca tgagttcaac ataaggtacg caaagacaaa acacagtaat acttcttgat 180

attggtttat gcagttcaca ttcgatttca tcttcgactg ggaaggaatg ggctgcacat 240

ctggtgctgc agcagcgtca nccacgggct acctgaacac gcgggcgagc cgctc 295

<210> 926

<211> 96

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-G3

<400> 926

gcgtcggacc agatccggcc agtcgaacga gaatgtcgcg cgccacagct gaggtcctct 60

tctacatcct cgccgtcgac tgccttcagc gcggtc 96

<210> 927

<211> 502

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-G5

<400> 927

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ggaaagatcc atctacagat ttcaggggcg gtgggttttat atctttggag aatttactgt 120

atttctctag gaactatcca aaatccttcc aggagctcct ccgtaagcag aatggtgata 180

gagcattgtg ggaatatccc tttgctgtag ctggtgtaaa tattacattc atgctgattc 240

agatgcttga ctttcaagca gctaagccaa cgtcgttggt tggagcagtt ttcctaaatc 300

tacgcttata aaatgatcga ncgttcgaca ttctttactg cataaccttc agactgatgg 360

atcagaaatg gcgttaaagt cacgccagtt acatggattt caatacgggt attaaatcaa 420

cacggcgcca gctcgagagg gagctgttgc tagaagatat caagagaatc gaggacatgc 480

catcgtacag gtttctcgcc tg 502

<210> 928

<211> 235

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-G6

<400> 928

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cgccggggcc acgggcgcgg tccgcctcgc cgagagcaa cgccccgcgg gcgtcggccg 120

tgcncaggtt cggcgtgtgg gacgagcaga ccgcttcgtc ggccgcgcaa gggttcacgg 180
 tgcagttcga gaacgtgaat gcgaaccggg aggtggccac gtccgggggtg ccggc 235

<210> 929
 <211> 450
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-G7

<400> 929

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 cttcacgtac ctgcgcatgg ggcccgaact gttccagccc gacaactggc gccgcttcgc 180
 cgcgttcgtc aagcgcataa cggagccggg cgcgcgggag gcgtgccggg agcaggtgga 240
 gcgggaggcc gacggcgtcg cgcaggcgac ccattccctc gtgcacgagg ccgccgtcgc 300
 gctcacgagc gtgccggacc gggcggcggt cgcctacgac tgtgttcgat cgctagacgg 360
 ggtggcacgc tgcgaggact acctgtatgg cgagtcctta tacttactca tacataagct 420
 gcgccgccgt gtcgtcgggt cgtgcaccgc 450

<210> 930
 <211> 233
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-G8

<400> 930

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 aacgcgcgtc aagaggaagc gcaggagcgc ggcacgtggc gcgcgggcac ggccgcatcg 120
 gcaagcacag gaagcagccg ggaggtcgcg gtaacgccgg tggcatgcga caccaccgta 180
 tcctcttcga caagtaccac cggggcgacg tccgcaaggt tggcatgcgt tac 233

<210> 931
 <211> 247
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H1

<400> 931

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ctcagtttct tcgaatagta gcattctatg cagcagagct tccagcacct aagtatcatt 120
gtcgcgaggg ctgcctctg gctagattac caccaccca gaatgcagct gaggtctttc 180
tgattaattt cccaacaagg agtgatttat ggatgtggtg acttgatatt ttcatgccac 240
atgattt 247

<210> 932

<211> 339

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H10

<400> 932

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ctccatcggc cccgggacct ccaaggtgaa catcacgac gtgacctgcy gccctggcca 120
cggcatcagc atcggaagcc taaggcggta caaggacgag aaggacgtca cggacatcaa 180
cgtcaaggat tgcaacttta agaagacgat gttcggcgtc cgcataagg cgtacaagga 240
cgccgcctcc gtgctcaccg tctccaagat ccactacgag aatatcagga tggaggactc 300
agccaacccc atcttcatcg acatgaatta ctgccccaa 339

<210> 933

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H12

<400> 933

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tcgtggcggt gttgtctgcc ggctcttcc cgcaggcggt agggaaacggc aagggaagg 120
tgcatggcgg cggtgccgtc aaccgcgtgg ttgccggcat ctgctctcgc gccccattcc 180
cagaggtttg cacggccaca gccgggccc atgcatccaa gtaccgggtc atcgaccatt 240

tggccgtgct gaacatgcag gtggccgcgt tcgccaagcg cacagcgagc gcgcggaagc 300
acgtcgcggt ggcgggccgc actattccac cgccgcaggc acaggccctc agaacctgcg 360
acacgatgta catgaacacg caggacgcca tcggcgcggc gcagcgagcc atcgcg 416

<210> 934

<211> 248

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-H2

<400> 934

ccgaagaagg ccataggacc ctggcctcgt gntacaacat gacggccatg ggctacgtgc 60
cgtacctgtg cgggctcaac tacacggacg acagcgtgag cagcatcatc taccgggagc 120
cgccggtgtc gtgcgccaag ctgtcaaggc tcgaacagga cgacctcaac taccggtcca 180
tcaccgtcat cctcaaccag ccgcgcttca gcgcgaaggc caaccgctcc gtcacgaacg 240
tcggcgcg 248

<210> 935

<211> 165

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H3

<400> 935

gcgtcggggc ccatgtggtc gtcgatacgg gcacaggttg cgatggctgt ggtgttggtg 60
ttcttggtga gcggcgcatg gtgcggctct cgcaaagtcg cgccacgcag agagcatcac 120
ggccacctat ggcaacgact ggctggacgc taaagcgaca tggtta 165

<210> 936

<211> 79

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-H4

<400> 936

cggccacgc gtccggtccg aacaagacaa gtctgtgttg ccttanaaaa tcaagtggca 60
cggaanaaga ttctgaac 79

<210> 937
<211> 325
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-H5

<400> 937

gacaagacca tcgacgggcg cggagcgcag gggcacatcg tgggcgcgca gatcacgctg 60
cagaacgtgc gcaacgtgat cctccacaac ctgcacgtcc acgacgccgc ggcgcacggc 120
ggcgggcgca tccgggactc gcagcacgac tggggcggtgc gcgngagag cgacngcgac 180
ggcgtctccg tgatggngtc agcnatgtct ggatcgacga cctgtcgatg agcagctgcg 240
cggacgggct ggtggacgcg gtggacggct cgaccgccat cagcgtctcc aacggccact 300
tcacgaggca cgagcacgtt atgct 325

<210> 938
<211> 488
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-F5

<400> 938

ccacgcctcg gacggggcaa gcctcacgga tcgtcctcct cgccgtcgtg gcgctgctgt 60
ccgccggact cctctcgag gcacggggta anggtagggg aggcagggga cacggtggcg 120
ccgtcaatcc gcaagtcgcc ggcatctgct ctgcagccc gttcccgag gtgtgcacgt 180
ccatcgccgg gcggcacgcg tccaagtacc caggcatcga taacctgacc gtgtgaaca 240
tgacgtgcg cgcgttcgcc aagcgcacgc cgcaggcgcg gaagcacgtc gcgaggtcgg 300
cacgcaccag cccgcggcag catacgcagg cgctcacgtt ctgcgacacc atgtacatga 360
gcacgcagga caccagctac gcggcgagc gggccatcac gttcacggac accggcatcg 420
ccaagatcat gctgcagctc gccgtcgacg acttcgactc gtgcgaccgc cccttcaccc 480

aggccggc

488

<210> 939
<211> 371
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H6

<400> 939

gcccacgcgt ccgaagatga cgatcaagct ctgaaatcac tctcgagcat tgagatgaat 60
gagcatcagt caaaggaagc atcagtgtct cttatacttg atagcttgga agatctgtca 120
gagtcagaat tgtcgactat tagaaaacag ctgattgagg aattttcagc agatgacatt 180
tgtcggggat ctcattttac tgaaacacct tcgaaatctg gagcacaaaa tggaaaactg 240
caccacaaat ctatggaggt tattccattc ggatttggtt gtggagatgg ggctctcggc 300
gaagcatctg acagcttagt agaacctcac ttgcgacatc tgcgatgtaa cagcgtttct 360
gatgttgacc g 371

<210> 940
<211> 423
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-D2

<400> 940

tccggaagac caccgtcggc cgggcgcgca gtgcaatcag ttcgcgcaga tcacgctgca 60
aactgcagaa cgtgatcctg caaacctgca catccacgac tccaaggga ctcggggcggc 120
atgatccgcg actcgaagcg gactacggg ctgcgcacgc ggagcgacgg cgacggcgctc 180
tccgtgctgt cgtccagcaa cgtgtggatc gaccacctgt ccatgtccag ctgctccgac 240
gggctgatcg acgtggggaa cgggtcgacg ggcatcaccg tgtccaacag ccacttcacc 300
gaccacgacc acgttatgct gttcggggcc agcaaggaca gcccgagga cgcggtgatg 360
caggtcacgg tggcgttcag gcacttcggc cgcgggctgg tgcanccgat gccgcgctgc 420
cgc 423

<210> 941
 <211> 285
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D4

<400> 941

ctttctcgca cctcaacett tctccttttc ttgccacggc aaaacacctt cgccggcgaa 60
 agcatggcca tggcgtaccg tgctcctggag gtcacgctgg tgcggcaaaa tgacctcaag 120
 aaagtgtcgc tcttctcgcg gactcgcate tacgccgtgg cttccatctc cggattcgac 180
 ctccgcatcg cttcgcacag cgaccaagca gaccacagca acggctgcaa cccctgctgg 240
 aacgccgtgg tacacttccc catcccggtt ggcgctgaca cccgc 285

<210> 942
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D5

<400> 942

ggattccgga tcgaccacgc gtcgggcaat ctgctggcag acacggacct aagccagtac 60
 aaggatcatg gtaattggat cgagattcta cgcgtggaca accttgtcag cagcggcaag 120
 ggaaagcgcg acgggcaggg gccagccgtg tggagcaaga actcctgcgt caagaagtac 180
 gactgcaaga tccttcccaa ctgcgtggtg atggacttcg tgaacaacgg ggaggtgtcc 240
 gggatcacgc tgctcaactc caggttcttc cacatgaaca tgtacaagtg caaggacatg 300
 ctgatcaagg acgtcaatgt gagggcgcg cgggggaagcc caacagcgac ggcattcaca 360
 tgggcgactc gtccggggtc acgatcggca agcacgtcat cggcgctcggc gatgactgca 420
 tctcc 425

<210> 943
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D9

<400> 943

cgggtcggcc acgcgtccgg acaaccgctg cggtcagtgt aggtttctga atcatagctt 60
ggcgatgcct gaggctagac aaatactgag ctagccttca gaaaaaaaaa gaaaagaaag 120
agattgagaa gcagggagaa aaaatggcac tggcccattg aggaagcttg agaaccagtt 180
aacaagaatt gccaacatat tcttggacaa tcttgtaac agagttttaa gggttcccag 240
cagagaagag cgcgtgcaac caccacattc atataattaa taagcaaggt ttagagaaga 300
ggcaacatgg gcacaaagat gaagaagggg atcctgaagc cgttccgcta tatctcaacc 360
atcatggatg gtaaggaggc tgaaatgcaa aattgggttc cgacggatgt aaaacac 417

<210> 944

<211> 305

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-E1

<400> 944

cgcgtcggcc ggatgcgccg ccagagcaag gccgtcgcgc gcgtccgcct cgtcctcgac 60
gagaagaagg tctcgcaatt caanggccaa cgatgacgtc tgagataatc catgacgggtg 120
gcgcggcgaa ctctatcat aaaacctatg ctctctgcc aaggagtgc tccatggcct 180
gtcctgggac acctgtgaga tgacgtgata gagcgagtag tacaactggc ccagcgagcc 240
atgcagagac gctcgacttg ccacaggccg gggcatatta cgcgatgccc agcagcagat 300
gtact 305

<210> 945

<211> 241

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-E3

<400> 945

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ccttgctgag cgtggcccta gtgggcctgc tctctgcc a gctgcgcagg agcgccctccg 120

cccaacagaa agacatccac gtcctcggca ggcgcgacgg ctccagcgac ngcagcaccc 180
 cgagtcgaa gccgcgtcgt ctacgcngac atgaagctgg ctgatacgga atcggatgcg 240
 c 241

<210> 946
 <211> 372
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-E4

<400> 946

ctgggtgggc cactggcaat ggatcgtctg cggcagtgcc accaagctgg gttttcttct 60
 gtttgtaacg tggtccgtag actgggacaa ggaggcagtg aangcaacgt acagagtgtt 120
 agggatcatct ctcccgtag catgaaaaaa atgccagtgt tacatggaaa tncatttga 180
 aggcagttga acagaacca gcagagaaag cgtgggaaaa aaactttcta tagtttggga 240
 catctcaaga tcatagatag ctaccgggaa ggcaagaaga accacgacca gtatttttgg 300
 attcatctgt actgttaaata tttgtagcac tgcaatgggt tttcaggaaa ttatagtagc 360
 ttggattgac tc 372

<210> 947
 <211> 206
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E5

<400> 947

accacgcctc ggacctacta taacaattgt agatttgctt gctggtcact ctgataaaac 60
 tagtgatttg catgcgatca aatgtaacgc tcgatgctgc ggtgctacca tgcacgtacc 120
 atattcgcgt aagtcagatg acaaatcaag tctatatcct gcagactggg cttaccacta 180
 actacctagt acctcctagc ttgcta 206

<210> 948
 <211> 114
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E6

<400> 948

gcgctgctca tctcaatcct cgagaaacgc atgcccacgc gatcgagaga tagcgatcatc 60

gccgactgca acgacgatcg ctacatcctc gatgctcact cccggacaac tatc 114

<210> 949

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-E7

<400> 949

accacgcgtc gggcgcaaag ccaatcaata atcagcagcc acatcaatcc attcgctttc 60

ctctcncgct ccacttccat gggcaagggt cggtccttct tcgcgcgctc ccgcagcggc 120

aagcgcgga gcgcccggag agcaggctcg tctcgcgcgc actcctccgc ggccagcgcg 180

ccgccgtccc cgtccccact cccgaggagg tcacggctcg cgtcgtcaac cacaaccagg 240

gacgagacgg agcgcggtgt ccgcaagttc gacgnaacg gcgacgggca gatctcgcgg 300

tccgagctgg cggcgctgtt cgagggcggt gggcacgccg tgaccgacga cgaggtgtcg 360

cgcgatgatg 369

<210> 950

<211> 246

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-F1

<400> 950

cgcgtcgggc cctcgacttc tatttcaacg tcaaccggca ggtgtcggag cccaggatgt 60

cgtttcgcac gagcacgagc tcagggccgt ctctgtcggg cagcaactcc tcgccaacc 120

tctgcnacac gccagccca ggtagccctg gtgcgcactc gagtaacgcc ttggagtcac 180

ggaagatttg caaccagga gataaccctc tgctgtgtga agacaaggct caggcactgg 240

gctcaa 246

<210> 951
 <211> 292
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-F2

 <400> 951

 gtcggcctcg ctcatctctg cgcacgtgat agacgcccggt ctccgcctcg gctttcttct 60
 cctcctcgtg gccgcggcgt tcgcgcgcgt ggtctccgcg cagctctctg cagagttcta 120
 caanacgtcg tgccccgacg ccgagaagat catcttgggc gtcgtcgaga agcgggttcaa 180
 ggcggnaccc ggcaccgccg ccggcctcct ccgcctcgtc ttccacgact gcgtcgcaaa 240
 cgggtgcgag gcgtcgatct tgatecgagcc catgtcgaac caggcctccg ag 292

<210> 952
 <211> 246
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-065-Q1-E1-F4

 <400> 952

 gcaaggcgac ggagacgggg atctcctgct gctcgggtgct ggctggagtc ctgcagaccg 60
 acgcccgtg cctctgcatg gtcgtggacg gcacgccacg tccttcggca tcgccatcaa 120
 ccagaccagg gcaactggagc tccccggcgt ctgcaaggtc aaggcgccgc cgctcagcca 180
 gtgcacaggc gtcccgggcg cacctgcacc gacgcctcgc gacgaaccag cagcgggagc 240
 ggagga 246

<210> 953
 <211> 313
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-B4

 <400> 953

 gcgtcggccg gcgtcggngg tgctggatca catgaccggc ggccccngg taccgattcc 60

gctggggcgc aaggactcgc tgtcgtcgtc gcgcaagagg ccnacgtcga gctgccacac 120
 gccaaacttca ccgtggaccg cctcatccag atgttcggcg ccaaggggtt cacggtgcaa 180
 gagctggtgg cgctgtccgg cgcccacacg ctgggcttct cccactgcaa ggagttcgcc 240
 gaccgcctct agaacttccg cagccagggc gggaagccgg agccgttcga cgccagcatg 300
 aaccgcctct acg 313

<210> 954
 <211> 462
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-B5

<400> 954
 ccgctcctgc gcacgccatc cgatgcggtc actggccggg gagggctcag aaacctttca 60
 tccaatacat acatctatct gagccctttc gcgcggtgag gcccgaccgg agtccacaca 120
 cacacggtgt cgatggcggc cgtaataagg agccgccgcc gcgtgtccgt tttcttctac 180
 gtcgtcctcg ccgcagctgc agctgcagcc gcggcgaggg catccaataa cgtcacctcg 240
 gacgaggagt actgggcgga gcgcgccgag gtggctcggt cgcgcaacct cgccgcctag 300
 gtcagcgacg ccgtggccgc cacgaaccgc ttcaacgcgg acgtgctgag ggccacgacg 360
 cggcnggcgc tggcgaagta cgatggcccc tgcattggcg ccaaccccat cgaccggtgc 420
 tggcgctgcc gcgccgactg ggcgacggac cggaagcggc tg 462

<210> 955
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-B6

<400> 955
 ccacgcgtcc gacaagccct ccacttcaag gaaaacaagc accgttttgg gttcgctaaa 60
 tcacggctga catatggtaa tattggggga aggttcgtga cagggagAAC catttggtga 120
 ggagtcatat cagaggggtg ccctggaccg gcttcttaag cttgcaagaa tagaagacga 180

tgacctgctg atcatgtcgg acgttgatga aatccccgagc ggccacacaa tcgatctctt 240
aaggtggtgc gacggcattc cagacatact tcaccttcag ctcaggaatt atctctactc 300
gttccagttt ttcctggacg acaagagctg gagggcatcg atacacaagt tacaagctgg 360
aaagacgacc tacgcgcact tccggcagggc agacgagctc ctcgccgatt caggggtggca 420
ttgc 424

<210> 956
<211> 400
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-B7

<400> 956

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tcgctccgac gcgtggtgga cgcagccagt gcgcgacgcc cccggctcct ggtccgttcc 120
gcagttccgc accccgcttc gaccaaccag gcgccgccgc gtcgcgtcgc gtcgcctcct 180
tttttttcgc cgcgcgcgcg gacggcgggc tcgtgcgcca gaagaaacct acgcggcagc 240
cgagatcctc aggtctcggc cgtctgacnc cagctcgacg gccagatgc agtcgcgcgc 300
gccggccgtc gtgcgcctca gtcctcact ccctcgctc ctcagcggcg agtagagcgg 360
ccaagcgggc catttttagg cgggagcgcg ggcggcggtg 400

<210> 957
<211> 442
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-B8

<400> 957

ccacgcgtcg gccgcctctc caccggcacg gtcgcccgga gtagcaagcg tctccgatcc 60
gatccagcgt gcgagcatat cacggcgatg gagggcagag cggccatgag ctggtactgc 120
ggctcccttc tggccgtggc catcgcgctg ttctgtccg tgtcgctcgg cgtgcgcgcc 180
gccggcgccg gcgcggcgt cgacatcagc gtgtcgtgtg cagcgacgcc ggaccgggac 240

gtgtgcctgc ggcgcgctcc acggcggaca gcgactccaa gaccccgcg gacctggcgg 300
 agggcgggcg tccgcgcggc gaccaccgct gggcgcgcg cgggcgacta cgcgcggcac 360
 gagatggacg tggcgaacga caacgacatg tggcagtgcc tgaacgagtt ccccggggga 420
 gatgaggang cgctggacac ct 442

<210> 958
 <211> 378
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-065-Q1-E1-B9
 <400> 958

cgggtcgagg cagcgcgccg acgcggttcc ctcgggcggtg caagcgggtg agagatctgg 60
 ggcaggccgc cgtggtgccc cgaggtgggt gactcatgcc gatgctcccc aagcaccagg 120
 cagcgagcgg tggttctccc ctaagactga gtgatggcga tgctccagag gcgggcaggc 180
 aaacagcgac ggcatcccc agtcaaacga gtggcgggcg cgcaccctaa gctcagtggg 240
 aaccgtgatt gtgcgaggca caataggctt cggcaatgac ggtggtggcc atgggacacg 300
 cgggtatctc cgacaggcgc gtgacgcgca gtcgtctcca tccgtggtgg ccacatgaag 360
 cctcgttggc tcccgtgt 378

<210> 959
 <211> 182
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-C1
 <400> 959

tcgcccacgc gtccgccacc atccgacagt aagcgagtac aaaactgggt gtggaagtcc 60
 aggacgactg ttctcaacgg gcctcttcag cagtccgggg gcagaacanc gcaagtaaac 120
 aggctcgact catccangca aagggcgcag tacccgagtc gtcacaagt accccgcgcg 180
 ct 182

<210> 960
 <211> 432

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-065-Q1-E1-C11

 <400> 960

 gggtcggcca cgcgctccga ctaatccaag aaaaaacatg gctgtgaatg tgagaaccat 60
 gtggtcgtcg atgcggggcac aggttgcgat ggttggtggcg ttggtgttct tggtagagagg 120
 cgcattggtgc ggtcctccca aagtccccc aggcaagaac atcacggcca cctatggcaa 180
 ggactggctg gacgctaaag cgacatggta tggcaagccg acgggtgccg gtcccgcacga 240
 taacggtggc ggctgcgggt acaaggacgt gaacaagccc cccttcaata gcatgggcgc 300
 atgcggcaac atccccatct tcaaggatgg tctgggttgt gggctctgct tcgagatcaa 360
 gtgcgataag cctgtggagt gctccggcaa gcccggtgtg gtgcacatca cggacatgaa 420
 ctatgagcct at 432

<210> 961
 <211> 395
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-C2

 <400> 961

 gcgtcggggc gaagcgaccc agccaatcga tcgttcagga aaaatacaag cttaccaaca 60
 acagcagcag caagcccagc cgttcgacga catggcccgc gtcagcgccg gggccgtggt 120
 ggcgtccta gtggcggtcg cggcggtggc cgcgttcctc gcggtgccg cctcggcgag 180
 atccggggag ctgagcccga tgggttgctg gcgggcgaag gcggcancgg cgcgggcccg 240
 cagaagtcct ccggcgcggt gggcgattgc gacgtggacg aggcggagga gctcgggctg 300
 agcgggggca gcctcgggtc cggcgacgcg ggtccggcgg acgctggcgc agcgggaagcc 360
 gaccaaccgg gtcagtangt acgcggcgct gcgcg 395

<210> 962
 <211> 458
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-C5

<400> 962

accacgcgtc ggccaaggtt gaacataaga aggtgccgcc aactcgtgcc aagtcaccaa 60
aattgacacg gagaaagagc tgcagtga aa cgcctcagac gccagaggga ggaaatggca 120
gtgcagtatg ctgccggttg catcgccaca gcattgggaa cgccagagat gttagcagca 180
aggcacaatg ttctccaaag agcgccctcaa aggctggatc agctactaga tccagggtca 240
ccaaatccat ggaagacctg aaggcttccg tgaanaaagt gggactgccca agcgccgcga 300
acttcgctct gcaggcgtga ctcagcaggc agtcactccc atatgccatt tttcatttta 360
atttatacct cacatcggca ggaagatggg ctcgtggtag ttttgcattg tccttgtaag 420
aacctggcta ccagagacct gcgctgttcc cgtcctgt 458

<210> 963

<211> 424

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-C7

<400> 963

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acagacatca cgaaggctgt gcaggaggca tggncatcgg cctgcggcgg cactgggaag 120
cagagaatcc tcatacccaa gggcgacttc cttgtcggac aactcaactt cacaggccct 180
tgcaagggcg acgtgaccat ccacgtggat ggcagtctgc tggcgaccac ggagctaagc 240
cagtacaagg accgaggtaa ttggatcgag attctacgcg tggataacct ggtcatcacc 300
ggcaagggaa gccgttgacg ggcacggccc agctgtgtgg agcaagaact cctgcaccaa 360
gaggtacgac tgcaaggctc tgctcgactc gctggtgatg gacttcgtga acaacgggga 420
ggtg 424

<210> 964

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-C9

<400> 964

gggtcggcca cgcgctccgga ctagacgtgc agcgattctc gatcatgctt gcgaccggct 60
ggcattttgt cccgacgctc gccgcccgtt ggttggatcc gtgccccccc cgatcgatcg 120
actgtgcgta tggatatgatt gggtagctgt tgccgtgttg gaggtctggc gtccggcgat 180
ggcacaccac agcggcgcgg cgccggcgcg cgggcgagcc atggccatga atcgatcggg 240
tgtccagatc cgggtggagg aggtccggcc aggcagagcc gcagccagcc tgcgttgcg 300
ctgcctgttc gaagtgatcg atcagccgga ggatgccgag gaggtatcag attccgattc 360
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<210> 965

<211> 251

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D1

<400> 965

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acataccaga gatgaggttg ttggttgaat ttgattcgaa gtgctaata agagaattgt 120
gagctccggc ccggcggtgc cgccctcggg gttgtgcatg tagtacgtct ccgagtcctg 180
tggaccgacg aggcggtcga aatgcgcgcg catgtaagt agctcgccgt ccgacgggtg 240
ggacatatcg g 251

<210> 966

<211> 392

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-065-Q1-E1-B2

<400> 966

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cggagggcgc tgaacctctg caagacctac gacctggacg ccgccgacaa cctcngccgc 120
ctgcaagegc gccatcggct tccgcgacgc cgtcaccatc cgcgccacga tgagcatggt 180

ggcgcaggac acgcagaact gcgaggagga gttcaggaag gccgtctccg aagaacccat 240
 gggggagcac agcangtcgc tcactnagat gtccgagatc tgccgcacgc tctccaacat 300
 ggtcgcctac gaacatgtcc attgatttgt ttgtttcctt tccccgacgc cctactacgt 360
 tcggtagagt cgtcgtcgtc gtcgtcgtcc gg 392

<210> 967
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H2

<400> 967

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 cgtgcggcgg cactgggaag cagacaatcc tcatacccaa gggcgacttc cttgtcggac 180
 aactcaactt cacaggccct tgcaagggcg acgtgaccat ccaggtggat ggcaatctgc 240
 tggcgaccac ggacctaacg cagtacaagg accatggtaa ttggatcgag attctacgcg 300
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 gcaagaactc ctgcaccaag aagtacgact gcaag 395

<210> 968
 <211> 390
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H4

<400> 968

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 cgcgccaacc cgagagaaaag atggagatga tcaagaggat cctcatcgcc gcgctcctcg 180
 tagtcgccgt ctcgccacc gcagtgtgg cctccaccga ggccgcgcgc gccggcgccc 240
 cagccgcctc cgagtcgtcg gcgtccgccg aagccccgc tggcgccgcc ggcgcggcg 300
 ccggcaccgg caccgcgcg gggccctccg ccagcggcgc cgcgcccgc ctcgccgccg 360

cgcccgcgcg gctcctcttc tcctcctcg 390

<210> 969
<211> 76
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H8

<400> 969

gaggccgggc ccgtgctgtc catgtgcccg gcgttcgcca agccagcaca tccaaataaa 60

accgagaatt aaatag 76

<210> 970
<211> 331
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H9

<400> 970

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cgagagaacg aagttgaaag aacaaagtgt aacgcggcgt catcatagat atccgaaagg 120

actacagcac caaatataca ccacagagtgt taagagaagt cgccgtccgg acaaacgtgc 180

acggtacgcc acgagcaccg caacccactt cagtgtcata tccctcatca gactgaacac 240

gatcctgagt accggttacg gagcgagtcc acgtccggca agagacgggg cccaacgatt 300

cggatttctt caccgatctc ctgaagaggg t 331

<210> 971
<211> 332
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-A11

<400> 971

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ccgcatccag ggatggagat gaagaagatc gcccgcgcggt tctcgtcgc cgctcgggcc 120

accgtggcgc gggccgcgga ggcgccggct ccgtctccca ccagcggctc ctccgcggtc 180

gcacccgccca tcgtcggggc cgccgtggcc tccttcctcg cgtaccacag tcaactgagcc 240
cccggccgag gagccggaac cggaggggaag agaccaaggt ggggggagag acttggctgc 300
gcctgcgcgcg ctccgcggct ccgcgcattc cc 332

<210> 972
<211> 90
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-A2
<400> 972

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tcgcgcggtc catgatcatg cagctctcgc 90

<210> 973
<211> 206
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-A4
<400> 973

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angtgctggt gtctctggag gcgctaaagt tgggtgcgggg cgttgnacga aacggcgggg 120
agaagtggca aggcgtatac aggaaccggt gccgatgcgg gtgtttccgg tggaaggatc 180
ggtggcgctg atgctggtgt ctccgg 206

<210> 974
<211> 343
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-065-Q1-E1-A5
<400> 974

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agtccgtcga ggccggcaag gcggaggccc gaggcgagta ccaggcggag cacgcggcgc 120

agtgcgtcaa ggacaccgcc ggagccgcgg ccgacagcgc gcagctgcag cagcaccgcg 180
 ccaccggcac cgttgagcag gtggcgcaga cgggccaacg cgtggcggca ggcgtcaagg 240
 acacggtggc gggcgccgcg gttggcgtgc acaacacggt cgcgggcgtg cgagcggggc 300
 tcacgaacac ggtgaccggc gcggtggcgg gcgtcacgaa cac 343

<210> 975
 <211> 448
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-064-Q1-E1-H10

<400> 975

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 ggggccaagg gcattaacaa cggccaacaa taatggggca aaacattagg gattttgccc 120
 ctgggccttg gtgggccttg ctgggtggtt gccgcagcgg cgcccgtggc caccgcgtac 180
 ggctgctacg acgactgcta cgagcgtgc gccaaaggga aagaaagacc ccgcctgcac 240
 caagatgtgc aaccaggcgt gcggctccac ggaccaagge gccggtgccg ccggcgccgc 300
 gccggcttga tcgccagcg cattcatcgc ttcagctcga tataatcgct gtcctgtag 360
 caaccacat atgattcgat taatcttct cctctaattt ctgaccccg tcgaattttt 420
 ttcctttcga ttcctctact aaactact 448

<210> 976
 <211> 297
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G10

<400> 976

cgcgggatta ccatcaccaa caccgtcatt ggcgtcggcg acaacttcat ctccatcgge 60
 cccgggatct ccaaggtag cttcaccgac gtgacctgcg gccctggcca eggcatcage 120
 atccgatgct tagggttggt cagggaacat caggacttca gggcaagtag catgcaggat 180
 tgacttctgt taaaacaatc ttctggcttc gtctattggc attagacgta tgcgtcgcct 240

ttcacaagtt cacgttgatc cagtagcaca ttgcacttg ttacgtttga cccacgc 297

<210> 977

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-G12

<400> 977

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acgccaggcc gcccggaac attcaagaag gaaggaaccc caaaaacccg gcggcgga 120
caatggctcc gcgcacctca tcggcgga cttgcctgtg cctcgctctc gccgcggcca 180
cgctggcgct ggcccacggg gcccaaggag gaggaccatc ggcatcggcg gcggacctgg 240
acaaggtcac ggccgagacc ttctcgaca tcgagatcga cggcaagcct gcaggccgga 300
tcgtgctggg actgtttggg gacaccgttc ctaaaacagc agagaacttc cgagcacttt 360
gcacagggga gaaaggaatg gccaaagtcg gcaagcctct atggtacaag gggtcgacgt 420
tccacaggat catcccgggg ttc 443

<210> 978

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G4

<400> 978

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aagggctctg acacgtacga gccctaag cactcctggg gcgccatctg gaggaaggac 120
agcgacaaac cgcttaaggg acccctcacc gtccgcctca ctaccgaggg aggcaccaag 180
tccgtctacg acgatgtcat ccctgccaac tggaaggcca acaccgccta caccgcaaaa 240
taattaactt tagtgctgac aatactttaa gccggcctat gctagctata ctagaattgg 300
ttggatccca agcaatgcat tacacatgca tgcattggac cgtgatatct atttgcctacc 360
actaccctat tacgacagtg atgctggcgc caacaatgat ggtgtcatcc tcccttctcc 420
a 421

<210> 979
 <211> 407
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G9

<400> 979

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 gcgcatagga cttttcgaat ctccaagggc ctagccacga aagccatcag ggcctagagg 120
 agtctcgcac aggtttcgat tgaactccgc tacgaggggc gttacaacgc aacgagagca 180
 gtctggagag catgggcatt gggctttgac ggagagagga tgggtcaagtc cttcatgacc 240
 aagggcaacg tcgttgctgt atgtgacaac ttcataaggcc cttgcaaggc cgacgtgacc 300
 atccaggtgg atggcaatct gctggcgacc acggacctaa gccactacaa ggaacatggt 360
 aattggatcg agattctacg cgtggataac ctggatcatca gcggcaa 407

<210> 980
 <211> 328
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F11

<400> 980

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 cacagcattt taggattgag ttgacttctg tgcaccatcg cagcagacat atttatattg 120
 tacgttgagt ataagacatc tgggactcat cattcatccc aaacttcggt cgatggaagt 180
 cgaaacgtct tatcgttcaa tatgagtata ggggtttgac agcagtctgt tgcattgagta 240
 cttcgtgttg ataagtctct acatacgtac gtgcatgtat taggacaaac cagtggaaaca 300
 gtaagtttac gatgtccagg tgaccgtt 328

<210> 981
 <211> 63
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D8

<400> 981

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acc 63

<210> 982

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E10

<400> 982

acgcgtcaac acacgcgtcc gaatcctcgt gcacaacttt cttcttctag ccctttgogg 60
atatcttgct gtttttgggt tactgaacat gcaaaatacc atcgacgaat tttccctatc 120
aggcgatctt tccacactaa aagttgcagc agaggattgg tcagacacgt atatcgggga 180
ctttactaga gagggcgtca aggacagctt tcgacactta tttttgttac acaactcgcc 240
aggccatgac cagtttttga ctaacgacac ctcaatatct ggctcatcta tagaacctca 300
ctaagtgcct gagtgggttc cttttcacga tacttcttcg gatatcactg tcagttcggg 360
caatttcacc agtccccgtg 380

<210> 983

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E11

<400> 983

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ttttcatagt tactagaatt ggaagtttga tcaaccgctt ttatcagttg acgcatcagg 120
gatattcacc ctttgggtct atggtgctcc atgcagttac gcagagtttg caaggttttc 180
tatttggact tatttatatt taccacgaaa gagcactagg ggaagttggt ctattcattc 240
gtcgcaagtg gagtcgcaga ggggatttgc gcgaggattc ttttatcgca ttagagaaaa 300
gaggacttgc tcatttttca caatttgatg aagacgagga ccacgaggac aacatggatt 360
cgcagagtag ttcccttgca ttttg 385

<210> 984
 <211> 370
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E2

<400> 984

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gtttccaaat tcgatttgtgt ttcattccggg tgtgttttagc gggacatctc ttgtctgata   180
ttcctgctaa atacaattgg actcctatat atagaggcct tccggcacat ataatatata   240
tcggaccaac attattgtga tcactaatta tgtctctata tggtgccacg gggataaaaa   300
atTTTTTTTT tttataaata ctgaacgaca cacatcacca tgatatataa aatttacctg   360
gcaaacatta                                     370
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<210> 985
 <211> 281
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E8

<400> 985

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gtggtgagca accgcgggag acgtgtgtcc cggtgccttt ccttcgcttc gacggcgagg   120
gcacctgttg gcctcgcatg gctctggcgg gggccaagca tcgaagctcc atctcgcccc   180
gctgcccagc gccgcagcgt ctattcaaac ccagatccgc gcgatccccg ccaatcggca   240
atccctgcac cttgcctcac cttatctagc tcagctgcat c                                     281
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<210> 986
 <211> 340
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E9

<400> 986

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 tggcgtctct ggtcagccct ctccctctcc ttcccggggc cattgccggt gcctcgcccg 180
 ggccgctcgt gctctacaaa cgactacgat gcgcgggtgc gggagctgca gcggcatcgc 240
 cactggtact tgatgagcac cgcgggtgca ggtccggagg accccgccta cttgcacttg 300
 tcggtggcgg cgggggatct ttttatcgac gaccacagc 340

<210> 987
 <211> 365
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F10

<400> 987

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 gtcctccgc ggtcgcacc gccatcgtcg gggccgcggt ggctccttc ttgcgtact 180
 acattcactg agccgccgga cgaggagccg gagccggagg gaagagacca aggtgggggg 240
 agagacttgg ctgcgtgcg ctgctctgct gtcgccgcg attcccgatg cctgggcgtg 300
 ccctgattgg gcacggccgt ggcagtggca caccttcgtc ttccttttgt ttgtttttt 360
 tcctt 365

<210> 988
 <211> 386
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C10

<400> 988

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 tgcaaactca ctgatgacct gtcttctgta tgtgtggaaa agacgcttcc cgcagccaac 180
 ataaccaagt gcagtgcaca agaagactgg aaaaagtgtg tgactgaatt gccccaaaac 240

gattgtcgtt ttgcagtata tgactttgag tatcacactt ctgaatgtgt ttccaagaat 300
 ataataatat ccattctttg gtcacctgaa actgcgaata ttacgtccac gatgttgtaa 360
 tcttctatca gagaagctct tgttca 386

<210> 989
 <211> 452
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-064-Q1-E1-C11
 <400> 989

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 agttcttcaa ctgtttgaag ttactactcg tggacagccg tttgaagtta tcaagacaca 180
 gcttgctgca aatcgaaagg acagcatgat ttctgctttg aagactatct attctagagg 240
 aggcatattg ggcttttaac aaggactgat tccctgggca tggattgaag ctagtacgaa 300
 aggcgggtgc ttattttttg cgcataatga agcttctacc tttgttgctg cgttgggatt 360
 ttctccaacc gtttcagata cggtaggatg tacatttggt ggtgtcgcac aagcttatac 420
 tactatgggg ttctgtacgt ttatgaaaac cg 452

<210> 990
 <211> 381
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-064-Q1-E1-C5
 <400> 990

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 ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca aaggcatcg atgcgaaagc 120
 gtccgggcct ggtgggtcct tcgacatcac ggggttgggc gcctccggca atggcaagac 180
 agacagcacg aaggctgtgc aggaggcatg ggcacggcg tgcggcggca ctgggaagca 240
 gacaatectc ataccaagg gcgacttctt tgtcggacaa ctcaacttca caggcccttg 300
 caagggtac gtgaccatcc aggtggatgg caatctgctg gcgaccacgg acctaaagcca 360

gtacaaggaa catgggaatt g

381

<210> 991

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D11

<400> 991

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tttgggtgtct cgttttgaac ttgtgaataa taaagatgcc tcctgttgca ccattgtttg 120
gaatctcacc aaagacagtt aatcgtgaac ttgagcactg gatgagcaac ctaaatagaag 180
tccaaagtgt gataaatagt gtcgaaacca agttgaatac aactccagcc aagtggaaag 240
ctctctccca acacgtgaaa gaagtctctg aagagttgag tcatattcaa taaggaggat 300
cctcattatg atgttattgt ggcaggagta caagctagta aaaattttga aagtgcagaa 360
gcagacattt ccaaaaacga tggatttaga gaacgagcga tgacaaggtt gagaaagtat 420
cgtgacgaaa tcgaatctct tcgt 444

<210> 992

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B9

<400> 992

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gttgcttctt ggacgtatgc cgctataagc aaaacggagt gacaaagttg gaagaaaatg 120
cctcgagcag gtaaagttgt gtctcgctcg gttgtaggag gtgaccgaaa cagaagagaa 180
ccaacactta taaggattgg tcaacctcaa gcttcacta ccgcgaaaag ttcgactagt 240
gccaaaccac atagatatcg tccaggtacg agagcgctga tggaaatacg caagtttcaa 300
aagagtaccg acttgttgat tcgcaagtta ccgtttgcac gtctgggtta ggaaataact 360
cagcactatc atcacgaact tcgctggcaa gtggaggcag tactagccct tcaacaagat 420
gcagaggact acctagttgg tttgttggga 449

<210> 993
 <211> 186
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B3

<400> 993

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 atgacgcctt gacgaacatg ttccccagtg agaccgagat cgttgtcaaa attcaggtcc 120
 ttgctgggtg ccgtgggctg ggatcgtgcg caactgtgct gcacggaggt gtccatgatg 180
 ttaccg 186

<210> 994
 <211> 362
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B7

<400> 994

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 aggggaataa caggcgacga atgaaggcaa agaatgcacc tatgataagc aagctaacgt 180
 ccatagtttg ccagaatgt caggggtactg gaattcacgt caacggagat gaacttgata 240
 agccaggcat ttctttaaca gagatgtttc tcttcaagat gaaagcaatc tattttcaca 300
 aatcatggct gaatagacct gaaatgcttg aaaactgttc cactgggcct catttccct 360
 ca 362

<210> 995
 <211> 214
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G7

<400> 995

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 ttttctgagt agttgtataa atgctaccac cgtcattctt tgtaccggc cggaacaaac 180
 gaaaaacaca ctatctatgc tgtgttga attc 214

<210> 996
 <211> 328
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-G8
 <400> 996

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 tccagtgact atccacagca gcagcagcag gtctctctcg acgactcagt aggcattggac 120
 tgctaactgg taatcaacag ctaacctgcg ctctgccact agtgctcga agaaatcctg 180
 caagtcaacg acttcaagag agcggggctg catttcggcc tcgagcactg caagaacctg 240
 ctccacagca tcaactctta aagaaccggt taggcggacc tgcacgctgc cctagaccgc 300
 gctgaacaca tacgtctgct gtacaaca 328

<210> 997
 <211> 347
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-G9
 <400> 997

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 aacggctttg acaggtgcga tcccctaacg cactcctggg gcccattctc aggggaaggt 120
 gaggggcca ccgcttacgg gacctctcac cgtcgggctc actaccagt ggaggacca 180
 cgtccgtcta ccacgatctc atccctgcca cctggtaatg cgatcaccgc ataccgcgc 240
 caatagttga cttctactgg tgacaatcct ttacgcggc gcatgtctac cactaccaca 300
 attggttggg tcccacccaa tgcattacac ctgcattcat tggcccg 347

<210> 998
 <211> 351

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-H3
 <400> 998
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 tctccaacct gtgaaatact cccggcctgg attacccttg ttgggttttg gagaggagat 120
 tttggacaat gctttgacta aggcagaaaa aaataagatc aatttacatt tgggtggctgc 180
 agaagaagct cttgcattgt cgatatggac tatggctaca gtttgtcgtt ctctgtcttt 240
 ggaaagtgtg ctaggcttat tctactggagt tttgctggag aagcaaattg tggtaatatg 300
 cccaaatctg ggtgttctgt cagcaattct tttgtctatt ataccgatga t 351

<210> 999
 <211> 428
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-H4

<400> 999
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 agttgagcag cagcaaccac tgcacaagat gtcgtggcag acgtacgtcg atgagcacct 120
 catgtgcgag atcgaggggc cacacctgag ctctgccgcc atagtcggcc acgacggcgc 180
 cgtttggggc cagagcaccg cattcccaca gttcaagcca gangagatga ccaacatcat 240
 taaggacttc gacgagcctg ggtttctggc cccgatcggc ctcttccttg gccccaccaa 300
 gtacatggtc atccaaggcg agcccggcgc tgtcatccgc gggaagaagg gatctggagg 360
 cataactgtg aagaagaccg gacaagcgct ggtgatcggc atctacgacg agcccactga 420
 ccctggac 428

<210> 1000
 <211> 407
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-H5

<400> 1000

ccacgcgtcg ggccggcgcc acagcctctc atgctgtcgc tgctggtcgc cgtgctagcg 60

gtggccgccc atgtcgccaa cgccggccac gccaaagccc tgacgcctgg cgggcgcgtg 120

gtacaccaca accacggcaa gttcacggcc gggccgtgga aaccgcgcca cgcgaccttc 180

tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt gcgggtacaa ggacacgcgc 240

gcgcaggggt atggcgtgca gacgggtggc gtgagcacgg tgctgttcgg tgacggcgcg 300

gcctgcggcg ggtgctacga ggtgcgctgc gtggacagcc ctagcgggtg caagcccagc 360

gcggcgacac tgggtggtgac ggcgaccgac ctgtgcccgc ccaacga 407

<210> 1001

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H7

<400> 1001

ggaatcacgg aacgaccacg cgtcgggcag catgcgacct agcgagttgt gataccgact 60

cacattctcg atgaacacac gtatgtcacg cgacgctcgc agttacagtc ctccacctga 120

ccgctgcaga atggcgaccg ctaagcgtag catacggcat gaatctccat cacatcacia 180

gagccaagga cgacggaaca gtactaaata tactatacga aggtttaact cggtcacaat 240

gacgacaacc aactccatga cgtcttcgga cactagaccc gttcgattag aaattaacgt 300

catttgcgac atctcaagga tcatggatca actgaatgca gctagatata attgtctgcg 360

acgcatcttc tgatacatat aactatacat acgttttgca aa 402

<210> 1002

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-H8

<400> 1002

ccacgcgtcc ggacagaaaa cagtgggacg gagttgtttc actgcacgag cacatcctcc 60

ggcgaccacc ggctccctc tccgtcctct agcgaccgac caacgcgtcg agcgaagatg 120

tcgtggcaga cgtacgtgga cgagcacctg atgtgcgaga tcgagggcca ccacctcacg 180
tcggcggcca tcgtcggcca cgacggcgcc acctgggctc agagcaccgc attccccgag 240
ttcaagcccg aggagatggc tgccatcatg aaggatttcg acgagccggg gcacctcgcc 300
ccgaccggcc tgatactggg aggcaccaag tacatggtca tccaaggcga acctggagct 360
gtcatccgtg gcaagaaggg gatcgggggc atcactgtga agaaaac 407

<210> 1003
<211> 487
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-G6

<400> 1003

tggttcgtgg atggcagcgc cacggcctct cctgctatcg ctgctggteg cegtgctagc 60
ggtggccgcg gatgtcgcca acgccggcca cgccaagccc ctgacgcctg gcgggcgcg 120
ggtacaccac aaccacggca agttcacggc cggggcgtgg aaaccgccc acgcgacctt 180
ctacggcggg cgggacgggt ccggcaccac ggccggcgcg tcgggggtaca aggacacgcg 240
cgcgcagggg tatggcgctg agacggtggc cgtgagcacg gtgctgttcg gcgacggcgc 300
ggcctgcggc ggggtgctac aggtgcgctg cgtggacagc cccagcgggt gcaagcccag 360
cgcgggcgcg ctggtggtga cggcgaccga cctgtgcccg cccaacgacc agcagtccgc 420
ggacagcggc gggttggtgc aaccgccgcg ggagcacttc gactcagcat gcccgcgttc 480
ctccaga 487

<210> 1004
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-F1

<400> 1004

gcgtcgcgct cggggctcgg agttatagtc tacgattggc tagacattcc ttggctgaag 60
aattactaca attttggttt tgaccactat gagatgtcgt ggaggaaagt aggcttttca 120
ggtctaatta atctactgct ggggcacacg ggccatttg ccagcgggga ttggattcta 180

cctgacctca caatccaagg atccatgaaa ctaaactcta cacttaggac ctttcccaat 240
acattctact tcagctatgc tacaagaaaa acaagaaaaa tatttggaat tacagttcct 300
tcaagtgttc ttggagtgc cccattctc tttctgagag tcttccagat gtgtatgtgg 360
cggcaacctt caaaatgcac ctctgcctta c 391

<210> 1005
<211> 91
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-063-Q1-E1-F12
<400> 1005

gacccacgca tccgaccacg cgtccgcca cgcgtccgcg gacgcgtggg cggacgcgtg 60
ggcagcgatg aaaaaagtta agcgtaacaa a 91

<210> 1006
<211> 400
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-063-Q1-E1-F3
<400> 1006

gcgtcggccc aggcgtccgc agaggaggag ataaagatgt tgttacaagc gggcgatata 60
catggaactg acacattaga ttgtgaggaa tttgtgacag tcttgcttca cattaaaaag 120
atgagtaatg acgagtatct acctaaagct ttcgagttct tcgacaaaga cgggaatggt 180
tttattgaaa tgtccgagtt aatggagact ctaagtgatg gtgaactaaa gcctgatgag 240
caattgggta acgacattat tcaagagggt gacaaggata aggatggtcg catcagttac 300
ccagagtttg aattgatgat gaaaagtgga tcggactgga ggaacgcctc tagacgttac 360
tcaacagaga atttcagcag cctcagtcaa aaaactgtgc 400

<210> 1007
<211> 426
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-F4

<400> 1007

gcgtcggccc aggcgtccgc atcgcaatcg cacaccgect cncctgtcn cctccttctc 60
gcccggcacc gtcgagctcg gctgtggaaa cagaacanac ccatcaacca tggcgaactc 120
ggcgtcgggg atggccgtga ggcacgagtg caagctcaag ttccaggagc tcaagtogaa 180
gcgaagcttc cgtttcatca cgttcaagat caacgagcag acgcagcagg tgggtggtgga 240
caggctgggg cagccgggcg acacctacga cgacttcacc ggctccatgc ccgagagcga 300
gtgccgttac gccgtcttcg acttcgactt caccaccgac gagaactgcc agaagagcaa 360
gatcttggtc atctcctggt ccccgacac ctcgagggtc aggagcaaga tgctgtacgc 420
gagctc 426

<210> 1008

<211> 484

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-F5

<400> 1008

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cagcatgttg gaaggtcgtc agtgtcaaca aaccaggatc tgcctttcaa ggacgtagcc 120
aaccaatgtg aagcatttct gattgggaag cagcaaaagc tatctgctg catgagtgtc 180
tgtgaaaaag aggctggtga atcttccgtc gagcagtcac ctcggcagga tctcaagca 240
gatacgtttc tctgcacagc tgatgaacaa tggcacccca attcctgtaa gctgccagcg 300
ctgtgtcnct acgaccggtt ccttgcaacg tctgggtgct aagatgatct cttctgcgat 360
gtggatctct ataaccaaga acgtgttcag tggacgccta annaattggt ggtccagag 420
ctcatgcatg ctaaaatatg tgctgtcgtg tgtgagtga gatgacatga tttccctgtt 480
ttgg 484

<210> 1009

<211> 484

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-F6

<400> 1009

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tccttactgg caacctccag gacaatttct ttgccagttt cgctctgggt tggctgatca 120
ctaattggtgc tggctttgca tcttacccca tcgataccgt ccgcagaagg atgatgatga 180
catctggtga ggctgtcaag tacaagagct ccttggacgc gttccagcag attcttaaga 240
aggaagggcc caagtccttg ttcaaggggtg ctgggtgctaa cattcttcgt gccattgctg 300
gtgctgggtg gctttctggc tatgaccagc tccagatcct cttcttcgga aagaagtacg 360
gctccggcgg tgcttaaattg gagaaatatg atgacgaaca agagcagtggt gtgttcncgg 420
tcctttccaa tcanggatct ggtgaagttt ttgcctttca tatcgaagaa attaataatt 480
catg 484

<210> 1010
<211> 276
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-F7

<400> 1010

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tccttactgt caggtcttca gtatcctttc ttgccaattt tcgctctggg taggttgatg 120
actaatgtta atggctcttg attgtaactc atcgatacct tccgcagtgg gaggatgatg 180
acatctggta aggctgttaa ttatgcgagg gccttggatc cattccagct gattcttact 240
atggattggc ccacgtacct gttcaatgct gctagt 276

<210> 1011
<211> 489
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-F8

<400> 1011

accacgcctc ggccgacgcg ctccgacgtc actgccttgt gggccttacg tgggcctcat 60
 ggcttaaaat gccatgcccc agcaactaca cgagtcaaca caggcccggc cgggcccggc 120
 ccggcccaag aacccccatc tctcgattcc tccaacaaat tcccctttcc cttactcccc 180
 atccccaccc acccagcccg acgagcaaac cctagcgagc gagagagccc ggagccgaga 240
 gaccagccag ccatggcgct gcggtgcctg tacaacgaga tccggagcat gaaggtccgc 300
 gacgtgccgg cttacctgaa gccgcgcttg acctgngaca acgtcaagaa gagcgccgac 360
 caggccgtcg accgctacat cgagaagtac atcgacacga gctcgccgga ccctctctna 420
 cacgtctgca tcggagggat gatctttctcc tacttcgtca atctgccctg ngaagcgcg 480
 caactcgcc 489

<210> 1012
 <211> 369
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-G1
 <400> 1012

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 cgtcaaaacc acgctgctcg ccaagaacaa ggacttcgag gcgctcatgc gcgtcgccca 120
 cgcgctcatc aagcggggcca ccggtggcgc cggtgaccgc cggcgccggc gcccgccgcc 180
 cgcgccaaga ttcattaatt gattattaat tcgttgatta atccgaggag cgccatacat 240
 atctcgatcc atattgtatt tgtttgttta tagtatatat cgatgtgggg tacgtttata 300
 tgtacctgcc attgtcattt gattaggtac gttgttgcaa actttttacca cagtatttat 360
 cttcacatc 369

<210> 1013
 <211> 264
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-G3
 <400> 1013

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gcgctaagac gacgaaggcc tcgttttctc ctcggtgtct gaccatccaa tccaaactca 120
aaagaacaaa tacgaaagaa gcgtagtgaa ggggaacaaa tgaatggata tatgtaatct 180
tgagatgcat gccctctcaa atcactgtac tggggttctc aaaaaaatc attgtaatgg 240
gagttatata tataacttta tctc 264

<210> 1014
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D6

<400> 1014

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acacgatcga gctcaaggac agccacgagg aggacatctg ccagggtggtg ctggtggcca 120
gcccgcgcaa ggactgcgac gaggtccagg cgctcaggga ccgcgccggc gtcctgctca 180
ccaggaacgt tggcatctcc gacagcctgc gccccgcaa cccgctaggc tacttcaagg 240
acgtgccgct ccccgctctgc gccgcgtgc tcaagcagct ggactcggac gacgacgacg 300
accagtaaac tataccacgg cggcgtcgcg gacatgctgc aaaaaactac aacgatacag 360
agcgaacgca tggcatggat agcagtatct acggaaagaa aaggaagaaa aggaaaatta 420
aaaatgtatc agagtgcttg attca 445

<210> 1015
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D7

<400> 1015

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agccgccaat gcagaggaaa aggtcgccac cgccgccgag accacgacga cgggtggaggc 120
gaagaagaag gacgtcgagg aggccaggaa ggagaagcag gcgcagcaaa gctgaccgac 180
tgtccgtgca tgcgcgtgcc aactaatata attattggct gatgatacct gatgatcagt 240
gtgtgatcga gcaaggagac gacacttgaa ttctctacag ttggcatagc ggcataggtc 300

gggagagaca ctctcgactg gccacacat gtaacaaact aaccttcttc gatgtctccc 360
attatatttcc tccacggagt tcttctgatg aaacaacatg ttctaattgg gcttat 416

<210> 1016
<211> 542
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D8

<400> 1016

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agaacaaacc catcaacat gccgaactcg gcgtcgggga tggccgtgag cgacgagtgc 120
aagctcaagt tccaggagct caagtcgaag cgaagcttcc ggttcatcac gttcaagatc 180
aacgagcaga cgcagcaggt ggtggtggac aggtcggggc agccgggcga cacctacgac 240
gacttcaccg gctccatgcc cgagagcgag tgccgctacg ccgtcttcga ctctgacttc 300
accaccgacg agaactgcc gaagagcaag atcttgttca tctctggtc gccggacacc 360
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gagggcatcc agctggagct gcaggccacc gaccccgagc agatgagcat ggacattgtc 480
atggcgcgag ctctctgaag aggaagacgc gcatccgctc gcgcgatcgc catgcatgcc 540
cc 542

<210> 1017
<211> 292
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-E1

<400> 1017

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tgcacgtggt cgccgctgat cgcgagccg ggggtcgtct cacgggctat aacgctctgc 120
cgcagtacga cggtactgag cagactacc tgggtctatag gtcgccgagc gcgccgccga 180
ggaccggatg gtggccttca cgtacctgcg catgggcccc gacctcttcg acccgacaa 240
ctgtcggcgc ttcgctgect tcgtgcgccg catgaacggc gccgggtcgt gc 292

<210> 1018
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-E3

 <400> 1018

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ggccccgccc ttttccgaca ttcacagggg ggacaggaaa tcagcggcca tggcctcgat  120
tccggcgacg accttcgccg tcattctatc cgtcctcttc tgtgccgagg ctggcaccgc  180
cgtcgacaac gacctccccg actacgtcat ccagggccgc gtctattgag acacctgccg  240
cgccgggttc gtgaccaatg tcaccgagta catcgcgggc gccaaagtga ggctggagtg  300
caagcatttc ggcaccggca agctcgagcg ctccatcgac ggggtgaccg acgggaacgg  360
cacgtacacg atcgagctca aggacagcca cgaggaggac atctgcgnag tggctcttgg  420
ggagagcccc cgcagngact g                                           441
  
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<210> 1019
 <211> 483
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-E4

 <400> 1019

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cncacgctcc gtctttatct gtaatctgaa gcttacagga acatttgagt ggatcatgga  120
cggattggta ggcctcttga aagtccgggt ggtgaggggc atcaaccttg cctaccgcga  180
cgcaagaagc agcgatccgt atgtcgtcct acgacttggc aagaagaaac ttaagacgag  240
cgtgaagaag agatctgtga accccatctg gcacgaggag ctaactctga cagtcacaga  300
tcccagccta gctctgaagc tggaggtgtt cgacaaggac acgttcagca gggacgaccc  360
gatgggggac gcggagatcg acgtggcgcc gctggtggaa gcggcgaacg cgagcccgga  420
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<210> 1020
 <211> 362
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-E5

 <400> 1020

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 ggcgtcatcg acatcagcta cgggagcccc ggcggtaacc tatcactatg acacctcatg 120
 cattccacaa gtctcagttg gactagattt tgtgcgttaa ccatgtttgt accgcaatta 180
 tgagtactgc taatgactaa cacaacatca tgcggactaa ggctgtttgt aggtaaagca 240
 gcagctgtga cagatctcat gacaaatggc cgatgcagga tatgtgctga ctgtcgtgca 300
 cctgatccga agtggagcat ctactaatat tggagtgttg ctctgcttaa tatgtgcaga 360
 tg 362

<210> 1021
 <211> 555
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-063-Q1-E1-E6

 <400> 1021

cggaatcacg gcccgaccac gcgtcgggtcc tcctactcgg gctacaacga cgagctgctg 60
 tgggcccgcga cctggctgta cctggcgacg aggcggcagg tgtacgcgga cttcatcgcc 120
 cacgaggcca tctcgtcgag cgtggccgag ttcagctggg acctcaagtt cccgggcgcg 180
 caggtgctgc tggccgagtt caacatgacc tcggcgggcg gcgcgcagaa cttcaagtcg 240
 caggcggaca acttcgtgtg cgcgggtgctg ccggacacgg cgttccacca ggtgttcacg 300
 accccgggcg gcgtgatcca cctccgcgac ggcgccaact cgcagtacgt gaccagcacg 360
 gcgttcctgc tgggtggtgta cgcggacctg ctgctgccga cggggcagac ggtgctgtgc 420
 gggaaacagc cgctgccccg ggccgggtgc acgagttcgc gcggcagcag atggactacc 480
 tgctggggcg ccaaccgcg gcacagctcc tacgtcttgg gcttcggcgc caaccgccc 540

aagcagccgc acaac

555

<210> 1022
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-E7

<400> 1022

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ttcatcgccc acgagggccat ctctctgagc gtggccgact tcagctggga cctcaagttc 120
ccgggcgcac aggtgctgct ggccgagttc atcatgacct cggctgtcgg cgcgcagaac 180
ttcaagtcgc aggcgggacaa cttcgtgtgc gcggtgctgc cggacacggc gttccaccag 240
gtgttcatca ccccgggcgg cgtgatccac ctccgcgacg gcgccaactc gcagtatgtg 300
accagcaccg cgttctctgt ggtggtgtac gcggacctgc tggctctgac ggggcagacg 360
gtgctgtgcg ggaaccagcc gttgcccccg gcctgggttc agcagttccc gcgg 414

<210> 1023
<211> 500
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-E8

<400> 1023

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agaggagggg caggaggagg ccgcacaaaa tctatctggg gatcggagcg cgggcgacaa 120
gatgccacgc ggcggcaagc ccgcggcttc gtcgaagccg aaccggttcg actcggactc 180
ggactcggag tccagcaata agccggcgaa caagtccggg gcgtcgtcgt accaggcccc 240
cgccgacgcc aagaagcggg acaaggacgg gttccgggac tcgggcgggc tggagaacca 300
gtcgggtgag gagctggagc actacgcggc gtacaaggcc gaggagacga cggacgcgct 360
cgccggctgc ctgcgcatcg ccgaggacat caggcangac gccagcgaca cgctgatcac 420
gctgcacaag caggggggagc agatagccgg acgcacgaga aggccgtcga gatcgacagg 480

nactcgcaag agcgagacct

500

<210> 1024

<211> 478

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D5

<400> 1024

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cgacgatggc ccggccgcgc ctctctctca ccttctctgct cgccgcggcg gccgtgctga 120
ccacggtgcc cggcgctcgc ctgcceaagt cgaagctcgc caagaagagc gacgacgtcg 180
tgaacggggc cctcttgacc gagaagatcc aggcgaagaa gacgctgata gtggggcccg 240
acgaggagtt caagaccgtg cagtccgcc a tcgacgcggt gcccgccggc aacgccgagt 300
gggtcatcgt ccacctccgc tctggcctgc acaggggcaa agttgtgata ccggagaaca 360
agcccttcat ctctctgagg ggcaacggca aaggccggac ctccatctcc cacgagtccg 420
cctcttccga caacgccgag tccgccgcgt tcaacgtgaa ctccgacaac gtcacgtg 478

<210> 1025

<211> 360

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-C2

<400> 1025

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ccgtctttat ttgtaatctg aagcttacan gaacatttga gtggatcatg gacggattgg 120
taggcctctt gaaagtccgg gtggtgaggg gcatcaacct tgctaccgc gacgcaagag 180
gcagcgatcc gtatgtcgtc ctacgacttg gcaagaagaa acttaagacg agcgtgaaga 240
agagatctgt gaaccccatc tggcacgaag agctaactct gaccgtcaca gatcccagcc 300
tagctctgaa gctggagggtg ttcgacaagg acacgttcag caagggacga ccgatggggg 360

<210> 1026

<211> 373

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-C4

 <400> 1026

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 gtgtcgctct tctcccgga ctcgcatctac gccgtggctt ccatctccgg attcgacctc 180
 cgcattccctt cccacagcac ccaagcagac cacagcaacg gctgcaaccc ctgctggaac 240
 gccgtggtag acttcnccat cccggctgcc gctgacaccc ggggctcgc actccacgtg 300
 aggctccgcy cccagcgtct atacctgngc gatcgcgaca tcggcgaagt gttttgtgcc 360
 atcgacgaac tcc 373

<210> 1027
 <211> 437
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-C5

 <400> 1027

 accacgcgtc ggcaagatca ctacgagaat atcaagatgg aggactcagc caaccccatc 60
 ttcattcgaca tgaagtactg cccaacaag ttgtgtactg ccaacggcgc ctccaaggctc 120
 accgtcaagg atgtcacctt caagaacatc accggcacct cctccacccc ggaggccgtt 180
 agcctgctct gcaactgcaa ggtcccatgc accggcgtca ccatggatga cgtcaacgtc 240
 gagtatagcy gcaccaaaa caagaccatg gctatatgca cgaacgcaa gggcagcacc 300
 aagggttgcc tcaaggagct tgcattgttc tnagacctcc atcgactgac ccatctctct 360
 agttataatt tttctctcgt ccttgcatg cccattagat gctatccatt ggtaacgcac 420
 aacagtaaaa cgacaga 437

<210> 1028
 <211> 382
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C6

<400> 1028

ggaatcatgg aacgaccacg cgtcgggcag gggaaggagg agaaacagac caccagatcg 60
atcgagacct cgccgtcgtc cggcaggggt aatttggttc ttctccggcc ggggtgtgcat 120
ggcaaaacga cccacggtgc ccaagttcgg cacctgggac agcggcgatg ccgggtacac 180
ggcctacttc gacaaggtgc gcgagaacaa gggcgccacg gcgcccgcgc tgcgcccggcc 240
gcgcagcccc aacgaccccc accccgaccg cgagcccagc ccagaggagg ggccaatgaa 300
gagagtcccc ccgcccgtcg cgtccaagcc ggccaacgcc ggagccaccg cgagccgccc 360
ccgcccggagc ggccccacgg gc 382

<210> 1029

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-C8

<400> 1029

cggaattcat ggaacgacca cgcctcggga caagatggcg tgcacagaca atgcgatgag 60
agccttggtc ctctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg 120
catcgatgcg aaagcgtccg ggcctggtgg gtccttcgac atcaccaagt tgggcgcctc 180
cggcaatggc aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg 240
cggcactggg aagcagacaa tctcatacc caagggcgac ttccttgctg gacaactcaa 300
cttcacaggc ccttgcaagg gcgacgtgac catccaagt gatggcaatc tgctggcgag 360
cacggaccta agccagtaca aggaacatgg taattggatc gagattctac gcgtggataa 420
cctgggtcatc accggc 436

<210> 1030

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D1

<400> 1030

cgacgtcgtc agcgaaaaga atgagggcct tctcgccaag ctgcaccgca ccagttccag 60
ctccagctcg tcgagcgacg aggaagagga ggcgatcgat gagaacggcg agattatcaa 120
gaggaagaag aagaagatgg gcctcaagga gaagctcaag gagaagctgc cgggccacaa 180
ggacggccac cacacggccg caccgtctcc ggcgcccgcg cccgtggaga cgcattgccc 240
ccaccaggag gaagcgcaca ggccgcacgt cgtcccgcac cgggccccgc cgctccacc 300
gcacgtccac cagcagcacc acggcgtcgt cgtccaggac gacgtgaaga cggggaaccc 360
gccgcatgca cccggagg 378

<210> 1031
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-D3

<400> 1031

gcgtcgcccc aggctccgc tcacgcatcc gcaacatctg cgtcaagtcc ggcgctcca 60
agggtggccgt caacgacgtc gtcttcatga acatccacgg cacctccaac acgccggagg 120
ccatcacgct caactgcgcc aacagactgc catgccaggg cgtgcagctc gtcaacgtcg 180
acatcaagta caatggatcc ggcaacaata ccatggccgt ctgcaagaat gccatcggca 240
agtccatcgg cttggcaaag gacctggcgt gcatttgaac caattgacta acatgcatat 300
attatgtact aggtttgtgc ccgtgcgttg acacggaagt taaaaattac tataacacag 360
agatacatag cgataagtat cactatgaca ttcacaatcc atgtggcaca atatcactgt 420
aaccatctat gattgtgcat tgcga 445

<210> 1032
<211> 458
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-D4

<400> 1032

aggttgaaat aattatgtat gcaaggcatg ctatccgcac cgccttctgt ctgtacaaaa 60

ttcttgagta caaagaacgt gatatacaca ctaccggttg cgctcatcct gtactcaacc 120
 cactagcctg gcaccatcag tcttcatggt tgcaagtgtc ctcaaggaga atagagaaaa 180
 tctgttacia gaagccagag gactggatga tcttatcagg atattgaacg atgtaaattg 240
 gaacttagat gctaagaaag cttgcgctgg agcattgaaa cttcacaaaa aatacctgaa 300
 aaacgtacia gcanagaaac cttaaactg ccatggaaca cacgtcccca atggggctat 360
 cgttcacatt tcaacataca cgaccatttt ctacacacaa ctttgagtga cgatttatcg 420
 gacacaggtg gtaatcgtct gacatgtcct gagataca 458

<210> 1033
 <211> 464
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-A8
 <400> 1033

ggaatcacgg gacgaccacg cgctcgccga cgcggtggcc gaggactang aggcgtagcg 60
 ctgtgcaggg cgcgagcgcg ttcgttcggc atggaacaga acgcgggctc gttcctcgcc 120
 gtgcgtcgcc tctccggtgg cgccatccac caccatcgtc accactcttc cccggctgag 180
 gtcgtgggcg tgtccactgc gtggctcggg aaggggcttt catgcgtctg cgcgagagg 240
 agggagagcg acgtgcgcct gtccttcgat ttgagtccca ttcaggaaga gtgcttgaat 300
 aggttgcaga accggataga ggtgcagtat gatggttcaa atctggagca tcagaaagca 360
 ctggaagccc ttggcgcttc ctcttttctt ggaactgaac ttctagggtt agtatcagac 420
 cagtggaagg agatgggatg gcaagggaaa agatcatcta caga 464

<210> 1034
 <211> 356
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-063-Q1-E1-B1
 <400> 1034

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 gtcgcaccgg tggctctcgt cgctcgagagg ccacgagcac ggcgagacgc cgcggttga 120

caacttccgc tcgccgttcg cgcgcggggg ccccgcaaac acgcgcaagt cgtacgccga 180
cctcagccac atgtccatgc cggactcggc cgacatctcg tttgtcagca gcaccggccg 240
ccggagcgtc gaccaccacc cggcgatccc gccgcggatg tccaacggct ccgtggacag 300
ctacgaccac agcttcgaga tgtcacgcac gccagcaag tggggcgggc actcct 356

<210> 1035
<211> 319
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B2

<400> 1035

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gcctctgagg ccgcgagcgg cgactccccg gccgcgtcca tccgtccct cttctccgcg 120
gacaaccgt tccgccgaa ggcctctacg gaggagcccc ccgcgactcc tgcaccgcc 180
acgacgcccc tccccatgca acccagccgt gacgccaggg atgccgagcc gtcctcgaag 240
aagaataaga agagcaagga ggatggcccc cggcgcaagc ggaagcggga cgagttggag 300
gccggccggg agcggcggc 319

<210> 1036
<211> 432
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-B3

<400> 1036

cttgaccct agcctgagtc accccaccat atccggccag cccaacgaaa atgtcgcgcg 60
ccacagctgc ggtcctcttc tacatcctcg ccgtcgtgc cctcagcgcg gccgaggcac 120
cggcagagtc accgaaggca ggcagtcttg ccaaggcacc ggccgagtca ccgaaggcag 180
gcagtctgc agtcctgcc aaggcaccgc agtctgctgc cacgagaact gccccgcta 240
aggcacctca agccgcctcc acccccgcgc ctgccgtgc cccatcgtcg tcgtcgtcta 300
ggaagtctgg tccagctgcc gcgccacca ccgccgctc tacaccgtct tcttcacgg 360

acgaggagtt gagcccttcg ccgtcggcat ccaccgccga ggtggcgctcn cctgccgctg 420
atgggcctgc tg 432

<210> 1037
<211> 294
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-B4

<400> 1037

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aaatcataat gcggcacacg tcgttccggt caagaancat ttgaatagtg tcaggaccct 120
gttgccatgc tttgcgaaac tgaagctggt catgcgcat gtggatttcg agccatctgg 180
gtggcgccat catgcataag acatcgaatt gcctcacaac taatggacgt tgcaaagagt 240
accttctgca tatgcaagac tttggggatt tcacaatctg ctttcgctcg tccg 294

<210> 1038
<211> 182
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B5

<400> 1038

cggcgccacg gcctctcctg ctatcgctgc tggtcgccgt gctagcgggtg gccgcggatg 60
tcgccaacgc cggccacgcc aagcccctga cgctggcgg gcgcgtggta caccacaacc 120
acggcaagtt cacggccggg ccgtggaaac ccgcccaacg cgacttctac ggcggggcggg 180
ac 182

<210> 1039
<211> 403
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-063-Q1-E1-B6

<400> 1039

cggaattacg gaacgaccac gcgtcgcgcg ctccgaaggg gaagctctga taacatcacc 60
gttgtcatcg tccgcttcct atatggaact accggtgata aatcaggcgc agacaaagag 120
accaccaatg accaaaaactc ctaattgcct cctgtaggga tccatcatgc gtgtgttttc 180
ttctggctgt tgtatctgat gctcaaagta gatgctccgt gtgtcttcgc caaggaaact 240
gattcccccg accgtcgtcg tgatgctgcc cgctcatgct cgtagaaggg aatgcctgcc 300
gcagaatgac gaatanggtt ggtgtgtgtt atactatgag ggccctcttc gnnccccca 360
cccgcnegct ggacagcccc agcgggtgca agcccagcgc ggc 403

<210> 1040
<211> 475
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B7

<400> 1040

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atacatcgct agctcgccac caacaatggc ctcaaggtag tctatctctgc ttgccacaac 120
gacactggct atgttggttc cattcggttc gtgcaccacc cactcacct tccaggtcgg 180
caagggtccc aagcctggcc acctggttct caccctaac attgccacca tctctgacgt 240
ggagatcaag gagcatggcg gcgacgattt ctctttaca ctcaaggagg gccagctgg 300
cacttgacg ctcgacacca aggccccgct caagtacccc ctctgcatcc gctttgctac 360
caagtctggc ggctaccgta tcgccgatga tgcatcccc gccgatttca aggccggcac 420
cacctacaag accactctca gcatctgatg agcctgtgat gagtgatgac gaata 475

<210> 1041
<211> 376
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-B8

<400> 1041

ggaatcacgg aacgaccacg cgtcgggcag cgcgaggatc atccaacca ccatgtaaat 60
gtcgaaggtc cactgtacat atcgcttct cttaccggcg aagttatagg cagccggaat 120

aaggagagct ggctgttgga tcgaagccta caggattcca acgttcggat cggcgccccg 180
 tccaaattgc aggcatttct ttgccgttcc ctcttctttc ttcaaacgag aacacgcacc 240
 cattgctggt acagaacatg acataaaaaga ttcagtaaca tgatttgacc gtgtggcatt 300
 gtggcgccctg caaggccgtg taaaaaaaaa agtaccacct atgcaaacgc tttgctacca 360
 aatctggcgg ctaccg 376

<210> 1042
 <211> 539
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-063-Q1-E1-C1

<400> 1042

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 ctcaccatcg tcttcgagcg cttcaccggc ggctcggcgg ccgcgttcgc cgcgccgcgc 180
 ctctacgcgc tggcccgccc cgtggccggc tttttcgcgt acgacgcggc ggccggggccc 240
 gacgccggg tctcgtccg ggcgctcggc gcgcgggtgc gcgtcagatt cgatgacgag 300
 ctgtcggcgg cggctctgga caaggggttc gacgcggccg ccgcgtctgt cgtgacgttc 360
 gcggccagcg ggggaggtcg tggccacgta cgcgctcacg tcgggctccg cgtcnacgtg 420
 cgcggtcacc ggcacggggc acttcggtat aggtgtgcgg ctgcccgaga cgcgcccgcc 480
 agcctcagcc gggttggtgg gccgtgacgg tgggtgtcgg cgcgggtggg gtgctggga 539

<210> 1043
 <211> 241
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-E7

<400> 1043

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 ctacctccgg gtctgaatcc ggtgccgcct cgactaacga gagcgtctcg tcagaagagg 120

cccctacaag tgcgcccgan gacgcatcat cgggcagccc ttccacgtcg ccgtcagatg 180
 ccgatgctgc agtatcgccc gatagtagca gcggtggtgg taccgcctcg aaagagcctt 240
 c 241

<210> 1044
 <211> 221
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-E8
 <400> 1044

ctgcgggaac actgtacaag agcgggaagc cggcgctgcc gtggcggcag cgcctcgaga 60
 tcaccatcgg cgccgcgcgg cgctgcact acctccacac cgccgccatc tacacgagca 120
 tccgnctcga cgtgtccgcg accacgatcc tgggtggacga caactgggta gccagggttt 180
 ccgacttcgg cttgtccaag accggcccga cggccatgaa c 221

<210> 1045
 <211> 101
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-062-Q1-E1-F1
 <400> 1045

tcatagctaa gcaggctctga caggatgtcg tggcagacat acgtcgatga gcacctcatg 60
 tgcgagatcg agggccacca cctgacctcc gctgcatag t 101

<210> 1046
 <211> 122
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-F3
 <400> 1046

tcggcgctcg gcctcnnct ggcacctccg acaccgtaag tcctccatcg cgtcgccgcc 60
 ggccggcctc tgtccagccc gggctgcctg cgagggcttc tgatggccct cgacgccgtc 120

ct

122

<210> 1047
<211> 256
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F4

<400> 1047

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actcgtgaac caaatatttg gcacaagtta gctttgacctg tttcttgctg gtacatccct 120
caagggtttct ccgccacacg cgcttcgggt tcgcgggagc ttgccagatg aatgggtcaaa 180
ccccgatggg gctcgccgca gtagcattga ggccgtgctg caaccgcctc atctcgtccg 240
cctcggccgc cgcggc 256

<210> 1048
<211> 243
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F5

<400> 1048

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gaagctaagc tcaacaacgt gaccgtcctg ctggtggccc tcctcctcct gagcagtggc 120
gttcaggacg ctgccgccat gccaggcacg tggaactacg acgcgattgt cgccgacgag 180
ccaaacggaa agaacaagga cctgtaccgc cccgtcgcca acgccaataa atacacccgc 240
ggg 243

<210> 1049
<211> 253
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-F7

<400> 1049

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tctagcgatc gcgtcggcct ccactccacc ttcgcgaaaa agcttaccct ttgtgtttgt 120
 gtgtctgtct ggcaatcgat cgatggccat gagcgaggtc ggcgccgcgc gcacgcctgc 180
 tcgccatggc gctggcgctc gcttgcgtgc tgctcgtcag gtccgcggac gccgccacgc 240
 ccggcggctc cgc 253

<210> 1050
 <211> 118
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-062-Q1-E1-G1
 <400> 1050

tcgccacgcg tccggccgcc gcaagaagag cagccgcagc tggagcccc gtgtcggcct 60
 tcatggagat gacgacggat gaggaacggc ggagggggcga cgcgggggtgc tgctgctg 118

<210> 1051
 <211> 241
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-G6
 <400> 1051

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 ctncgtcgc gaaatccgcc cgccgattaa gcttgcttgc cctagcagat cgaagcccga 120
 gccctagccc tagccgagga gcgcgcgcga tgggcgtcgc ggtcgtgggc tgaggggccg 180
 cggctctttg catggcgtga ggaagcggcg tcccagggcg cgggaatgga ccctagcctg 240
 a 241

<210> 1052
 <211> 354
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-G8
 <400> 1052

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agcgcatgac ggagccgggc gcgcgggagg cgtgccggga gcaggtggag cgggaggccg 120
anggcgtcgc gcacgccacc cagccccctca tgcacgacgc cgccgtcgcg ctcnacaact 180
gaccggaccg gccggcggtc cccgtcgact gtgttcgata gctagacggg gtggcacgct 240
gcgatgacga cctgtatggc gagtccttat acttactcat acataagctg cgccgcgctg 300
tcgtcngtgc gtgcaccgcg cagtactgtg cgtacagcgg aagctgcgac tgcg 354

<210> 1053
<211> 134
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-H5

<400> 1053
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agggcgacaa gtacatcaac tgggcagcga agatggccat ctccaccaac atcggcatac 120
cgtggatcat gtgc 134

<210> 1054
<211> 448
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-062-Q1-E1-H6

<400> 1054
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gtggccgcgt tctcgcgggt gccggcctcg gcgaagtccg gggagctgag cgcgatgggg 120
ttgctggcgg cgaagggcgg cagcggcgcg ggcccgcaga agtgctcggg cgcggtgggc 180
gagtgcgacg tggacgaagc ggaggagctc gggctgagcg gcggcggcct cggctccgac 240
gacgcggtgc ggcggacgct ggcgcagcgg aagccgagca accggtacat cagctacgcg 300
gcgctgcgcg cggacgaagt gccgtgcaac aagcgcggcc ggtcctacta cagcaactgc 360
gaggcncaga aggccgccaa cccctacgcg cgcggctgct cgccatcacg cgctgcgccc 420
gcaacatgaa ctgagcccag cgctagct 448

<210> 1055
 <211> 254
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-H7

<400> 1055

ggaatatccg ggatgaccac gcgtcggaca acatgcccc ggcataccgc aggtggtcat 60
 cgtcacgggc ctcacctggc tctcctggtt cnccttcac ctcttcgaca ccgactggat 120
 gggccgcgag atgtagcacg gcaggccccg cggcagcccc gangacgtgg ccaggttcca 180
 ggangggcgtc cggcangggc ccttcngcct gtcctcaac tccgtcgtcc tcggagccag 240
 ctccttcctc atcg 254

<210> 1056
 <211> 95
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-H8

<400> 1056

ggcctgccgg tgagcgacga gtgcaaggtg aagttccggg atctgaaggc gcggcggagc 60
 ttccggttca tcgtgttcag gatcgacgac aagga 95

<210> 1057
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A1

<400> 1057

ggaattccgg gacgaccacg cgtgcgccat tacagcaatg gcggacaagg tgttcctcct 60
 cctccgactc agcatggtcg ccgtcgtcct ggctgccatc gccacagtag tgctcgcgga 120
 ggaagccgat ccgcgggcac tgccggcaca gtggaccacc gcgaagaagt acaaggccac 180
 gatggacgcc aagacgcggc aggctttcga cggcgtggtg gccgccgcta cggcagagaa 240

gcggtccag gcggtggagg ccgtgctgca gcagcagctg aacatggacg tgtccctgtc 300
 caaggcgacg tcttccgggg acgagaacaa ctacgtgagc gtggccgccc cctacgagaa 360
 ggccgcgggc gccgtcatcg cggcgacgcc ggacaacaag ctccgcgcta t 411

<210> 1058
 <211> 247
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A3

<400> 1058

tgaacaaaga gaagtagcca caagcatgtc tggcatcatc gacaagatcc aggagacgct 60
 ccacatcggg ggcgaccaca aggaggagca cgagcacaag aagggcgagg agcaccacaa 120
 gaagggcgag gagcaccaca agaaggacga cggggagcac aaggagggca tcgtggagaa 180
 gatcaaggac aagatcaccc gccagcacgg cgacaagtcc ggcgaccaca aggacaaaga 240
 ccataag 247

<210> 1059
 <211> 260
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-E6

<400> 1059

accaccgtcg acacatccgc atgaaggacg tcaagtgcgg ccgggccacg catcagctcg 60
 gccctgngg cgttacaagg acgagaagga cgtggaggac gtgaaggtga cggggtgcac 120
 gctcgccggc accacgaagg gccggcgcat caagtcgtac gaggactcca agtcgtcgct 180
 cagggccagc aagttcctgt accaggacgt caccatggac aacgtctcct aaccatcat 240
 cagtagacag aagtactgcc 260

<210> 1060
 <211> 407
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-063-Q1-E1-A4

<400> 1060

cgcgctcgga caatttctac gattcaaagc tagcaacaca gcatataaga ctgatgtcga 60
ccggattgtc ataactccag ctggcccatc aggcccatct tctcctcagt ctgaagctgg 120
ggagtccaat gtgtttcacc aggaaaaaga tgctgcagca gatggggcac cgctgacac 180
tgatggagca gtggctgagg ccggagagga agaaacaacg gaaaatgttg gtgaagcgac 240
atttagctat gaccgcttga tatccaaatc caccgatcca gttcgtggga tagattacaa 300
acgcagagag gcatacttat cagatagtga attccaaact gtntttggca tgacaaagga 360
tgcattctac cgacagccaa attggaacca ggaactacag aaccaaaa 407

<210> 1061

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A5

<400> 1061

gagaaccatg tggtcgtcga tgcgggcaca ggttgcgatg gttgtggcgt tgggtgttctt 60
ggtgagagggc gcatggtgcg gtcctcccaa agtcccccca ggcaagaaca tcacggccac 120
ctatggcaag gactggctgg acgctaaagc gacatggtat ggcaagccga cgggtgccgg 180
tcccgacgat aacggtggcg gctgcgggta caaggacgtg aacaagcccc ccttcaatag 240
catgggcgca tgcggcaaca tccccatctt caaggatggt ctgggttgtg ggtcctgctt 300
cgagatcaag tgcgataagc ctgtggagtg ctccggcaag cccgtgggtg tgacatcac 360
ggacatgaac tatg 374

<210> 1062

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-063-Q1-E1-A6

<400> 1062

ggaattcacg gaacgaccac gcgtcggcca cggaggccaa ttctccaact tctcctctcc 60

gtcgatcatc cagcaccagc atgagaatcc cgtcgaatcc cctctcaac caagggcgcg 120
cgcgcggtgcg tatgcctcct ccagatccaa agcaacagac agcgaggggg caccgggggtc 180
cgccgcatgt ttgcgattta tggaggatca tgctttcttg ctactacat tagctcctga 240
cgcgccgccc tcccctcgcg ttcattgatt tctgttataa ttactaccga gctactatct 300
ccacattatt attggtaaag aaagaaaggg cgctcctct aacttgatgg gcaatccgtt 360
tccatctcaa cttcaacgcc aacaacagtt gatgctacta tggttggaaa tcgggcatgg 420
tt 422

<210> 1063
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H6

<400> 1063

acacgtccga acacagttga gcgcgacgat gggatccctc gctaataaca tcatggtcgt 60
gggtgtcgtc cttgcagcgc tcgtcgccgg cgggtcatgc gggccccga aggtgccgcc 120
cgggtccaac atcaccacca actacaacgg caagtggctc accgccaggg ccacctggta 180
cggtcagccc aacggtgccg gcgctcctga caacggcggt gcgtgcggga tcaagaacgt 240
gaacctgcca ccctacagcg gcatgacggc gtgcggcaac gtccccatct tcaaggacgg 300
caagggctgc ggctcatgct acgaggtgag atgcaaggaa aaacctgagt gctcgggcaa 360
tccagtcacg gtgtacatca ctgacatgaa ctacgagcct atcgctccct accacttcga 420
ct 422

<210> 1064
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H8

<400> 1064

acgcgtccgc agcaatggag ctggtctggg tctgttgcaa cggaggattc cgatgatttc 60
gaggttgcaa ctaattgctc gttagagctg gactgcgtga ggccatctag tgccccaaaa 120

gcttcaggtt tatcaaatgg aggggggcaca gctgtaaaaa agatccaagt caaggggttca 180
aaaggttcag acgttagggg agtgaatcct ggaaaaaggt catcgccatt acagaagaag 240
ccgagtggac cctcaccgac gctaatacaag aagggcggag gtgaaggaag gaagactcca 300
aatggtaaaa caggaaccaa gaagtaagca acccagatga aacttggttt tgctgtgacc 360
aacttcacct tggttaggga cagataaaca tgttgatact accgggtgat acattgat 418

<210> 1065
<211> 371
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-062-Q1-E1-A1

<400> 1065

acgcgtcggc ccacgcgtcc gccacgcat cggccagatg ctgtcgaagc tgcggcaccg 60
gcacctggtg tccctgatcg gctactgcga cgagaacgag gagatgatcc tgggtgtacga 120
gtacatgcac aacggcgtgt tccngaacga ggtcgacggc agcgagggga aggcgccgct 180
gccgtggaag cagcggctgg agatctgcat cggcgtgcc cgggggctgc actacctgca 240
cacgggcacg gcgcaaggga tcatccacgg cgacgtgaag acgaccaaca tcctgcggga 300
ggagaacttc gtggccaagg tgtccgactt cgggctgtcc aaagacgggc ccgggatgaa 360
ccagctgcac g 371

<210> 1066
<211> 340
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-062-Q1-E1-A3

<400> 1066

attgatgac ttggtgctcc gatcatgaga agcacagtgg ggtgtagtcg attggcccca 60
gttcgcgaag agatgcagat gagagcagga gactctgcag cttattgcan ctgcggctat 120
gactttgtgg tgggtggaaa aacagttgac tatggctcag gaggatcacc gtcagataaa 180
agcagtgcctt cagaagtaag aactcatgtt cggccactgg atgctagcac agcagccac 240

gtggcaggtc cctcaagtaa gaggcgagct acanttgtgc ctgaagaggt ttcngatgaa 300
cgagtgttcc gtcgctttgt cagactactt ctggccttca 340

<210> 1067
<211> 342
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-062-Q1-E1-A6

<400> 1067

accacgcgtc gcgcgcgacg cgtgggcgag ccacaccgac gcgacgattc ctctcctccg 60
cccgttccca ccgatctcac gctctctctc ttctcctcgc gcgtcggcgt cgccatcgcc 120
ggccatgggt tgcggtggct ccaaaggagg cgtgngcacc ggcaacacca gcgcgggcag 180
caaggtcctc cggaggaagt cctcctcctg ctccaccggc gcaagccaca cctccaccac 240
gtcgcgctca gcctccggcg tcgtcgtcaa ggacgtcgtg aaggatgcng cggcgggccg 300
cgaagtgatg acgcccggcg acgcccagaa gcctatctct gt 342

<210> 1068
<211> 71
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-B1

<400> 1068

gcgatcgccc catggccgcc atggctcgtt ccgtctccct cgtcgtggcg ccctgctcc 60
tcctctccct c 71

<210> 1069
<211> 229
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-062-Q1-E1-B3

<400> 1069

agatgctgct ggagcaagcg acacatcctg tcgggcgcca cgtccgtgtt cggcgcggcg 60

ccggtggagg tctccgtgaa ngtggccggc atccactggc actacggcag ccggtcgcac 120
 gcccccgagc tcaccgcggg ctagtacaac aggcggcgcc acgacgggta cctcacgata 180
 gcgcgcgtcc tgtcgcgcca cggcgcgtg ctcaacttca cctgcgtgg 229

<210> 1070
 <211> 87
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-B6

<400> 1070

accacgcgtc ggcccacgcg tcngacgacg tatcttcatac tacgtacatt caactatact 60
 atatgtcgca tactaaatat tctgtct 87

<210> 1071
 <211> 356
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-B7

<400> 1071

cgctccatc gcatcccgcc gccgcgtct cgacggtcgc taataagccg ccgcatccac 60
 ggatggagat gaagaagatc gcctgcgcgc tctcgtcgc cgccggggcc acgctgggcg 120
 ctggccgcgg aggcccggt cgtctcgca ccagcggtc ctccggggtc gcagccgcca 180
 tcttcggggc cgccgtggcc tctttcttcg cgtacgacat tcaactgagcc gccggacgac 240
 gagccgcagc ctgacgtagg agaccagngt gnggggagag acgtgggtgc gctgcacggc 300
 tctgtgtctc tcgcgcattc ccgacgcctg ggcgtgtct gattgggcac ggcggt 356

<210> 1072
 <211> 356
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-C3

<400> 1072

atggacgata cataagagaa gcacgccgac ctcgatcaag agtgaggaga gcgaggagcc 60
gaagctactg acctacgagc aagaagctcc agaggaaccc gaaaatgctg tggaagagga 120
gaaagaagaa ctgagtcgaa gagcagaacc tcagcctgtg cctgatccag aacccaccc 180
acagcanacg actggagatc tactaaacct ggaagcagag gtgaatcctt cggctctgga 240
actcgaacaa agcaatgcat tggcactcac tattgtagca tcatgtgact acaagccgcc 300
agcatctcaa agtatgtctg atgtcaattc ctctgggtgg gagctggcac tgggtca 356

<210> 1073
<211> 237
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-062-Q1-E1-C5

<400> 1073
gcgagggcct gctgccaggg tgtctggcgc caggcgactc tgccgtcgct cccggcgctc 60
atcttggtgc cgccggccac caccatctcc acgcaccaca cctccggcgc cgtctagcag 120
cncaggacgc cgccggcgat ctccggcgccg ccgtggacca cgcccacccat tcccgctcctg 180
caggctctct gccctgctt ggctcgtcgac gacgacgacc tcgtcctcat cagcacc 237

<210> 1074
<211> 211
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-062-Q1-E1-C6

<400> 1074
cgtcgctgct agtgccctgcc gttgaactct ccggccacca ttgatccgac ctgcgctaag 60
ccatctatga gtagagaaaa acagtgaacg ccacctctgt actcgccccg acgtatggcg 120
cgtcgctcct gcagtaccgg cccacgctct gcgcggtgct caagtgttac ggctgccttc 180
aaatccgtcg tcggaccatt ggcactgggg c 211

<210> 1075
<211> 379
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-062-Q1-E1-C7

<400> 1075

gcgtccgagg cgggtgcagcc gcgactgggc gcgcgaccgc aagcgccctgg ccaggtgcgc 60

catgggcttc ggccacagga ccaccggcgg gctggccggc aagtgcgacg tggtcattga 120

cgccancgac gacgccgcgg acctcgtcac cccaggaag ggcacgctcc ggcacgccgt 180

gacccgggcc cgggcgctgt ggatcacctt cgcgcgcgac atggtgatcg agctcggcca 240

ggagctcatc gtgagcagcc acaggagcat cgacggccgc tgagcgcatg tgcacatcgt 300

gggcgcgcag atcacgctgc agaacgtgcg caacgtgatc ctccacaacc tgcacgtcga 360

cgacgccgcg gcgcacggc 379

<210> 1076

<211> 271

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-062-Q1-E1-C8

<400> 1076

accacgcgtc ggctcacct cncncntca cacagataat aaggaaaggt cgcgcccttt 60

tcctccgaca tccacaaggg gggaggggaa aacacgtaca ttcaccgggc ggcaataatg 120

gcctcggttc cggctccggc gacgaggacc gcggccgtca tcctatgcct atgcgtcgtc 180

ctctcctgtg ccgcgggtga cgacncgaac ctncccgact acgtcatcca aggccgcgtg 240

tactgcgaca cctgccgcgc cgggttcgtg a 271

<210> 1077

<211> 330

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-062-Q1-E1-D1

<400> 1077

gtccgctcga caacgagaac cgacatcgct catggangcc cggactctga atcctcatct 60

caccttcacc tgcgcactg tcagcgggag gttcatcttg caacattgca ttgcacagcg 120
 cgcacggcgc tcgnaacctt cagaagtgcg agcattgcgg agatatgggt gccacgaagc 180
 ttatggatga gcactacgat gagaaacatg ctccgatgaa ttgctcacgt tgcaaacaca 240
 cagtaggaac gcgagctatc ggatcttcat acaggcatac aatgcccaca aaggatgctc 300
 gcgtgccagt actgtcagtt tgaactgcct 330

<210> 1078
 <211> 229
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-D6

<400> 1078
 gaccggagat ctagaggaac caagtgtact gcaacggcga gctgggtgctg gtgacggggg 60
 gcaccaagcc ggagtacacg gtggacgtgt ggtccggaaa ccaccctac tatgtcggcg 120
 acacctcggc gctcagtggc atggacagcc agatcgagaa gttccgcaag aagtggggcc 180
 acatcaagga gtactggccc gaggaacagt ggagggagat gcaccaga 229

<210> 1079
 <211> 360
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-062-Q1-E1-D7

<400> 1079
 cgcgtcggcc cgcgcgtcag tcgagatata gatctcgaga agttgcagct cccacaatg 60
 gaagggtctgg ctaaaaaact aaaaaagaac tctgggagca agatcgagtc tgctagtgtt 120
 gcatgtcatc catcagaagc aggtactagt gactgccagc tggtttaact ccaagtcagg 180
 aaagaagatt cctttgaaat cagtcacttc aatcgctgat gggctaaaga aatcgtaacat 240
 tgagaagttg aggcccttgg aaaaaacgta tcagttccat gacttcgtct cgcgcttgct 300
 gactagcagc gatttcgatg cgaaaccaat ggtcatgctg ttgggtcaat actccacggg 360

<210> 1080
 <211> 303

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-062-Q1-E1-D8

 <400> 1080

 gcgggcacat ctagccgcaa gcattcttcc ttccttccca ttcacgcgtg accatggatt 60
 gaagacattg atcggcttct ctggagggtgc gtgtgncagc tcggagggtca nccgccgaga 120
 ctcataggca atggcaaccg caaggaagga tcctcagcag gttgagaaag tcaacctgaa 180
 naccaacgag tctggcaaag gggtagtacg gcgtgcaagg tctgtcnncg actctccgga 240
 tcgcagatcg tccccatccc cgggccagtc ctgagacaac gcaggccgac ggcacatca 300
 gtc 303

<210> 1081
 <211> 448
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-061-Q1-E1-G3

 <400> 1081

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 gaggtgaagg aaggaagact ccaaattgta aaacaggaac caagaagtaa gcaatccaga 120
 tgaaacttgg ttttgctgtg accaacttca ccttggttag ggacagataa acatgttgat 180
 actatcgggt gatacattga tatttgccac acgaatacgt cagtcctctt aaggaggag 240
 gtcgctagat cttcgggcat ctgctgtaaa tctctggtt atttggtgta gtacgaacag 300
 aaaacggacc acaaaaaact cgaggatggg aggaagatca tcatcacaag gacgtttttg 360
 ttagatgtat atgttgctta gcttattttt ctcgctgtgt gtaagggtt ctatgccctg 420
 cccatgtaca tgtttggtt cctgcccc 448

<210> 1082
 <211> 453
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-061-Q1-E1-G4

<400> 1082

ctcacgggtc gatgcaacg tctagcatgc caccctctt cgcttccgtt cctgtcctct 60

cctctgtccc tctacggtgc ttctgtctgc cggcccaaaa tcgcctcatc gaccacgccc 120

ccttccaggc tcccgtctcc atgggtctcc tctcaaacag gattgggagg gagagcctca 180

aggcggggga tcatatctac tcttgagggg cggcgtgggt ctacgcgcac cacggaatat 240

atgtgggcga tgataaggtg atccatttca caagaggaag aggacaggag gtcggaacag 300

gaactgtcgt cgatattatt cttgtgagtt ccaccccaaa acgaagcaac acgccttgcc 360

cgggtgtcac cgacgaaacc agcgacagca gcacagagac gaacggcgtg gtatcctcct 420

gtctcagctg cttcctagct gggggtgctc tct 453

<210> 1083

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H10

<400> 1083

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aggcgccgat ccggtacacc atcaccggga acaagtactt caacatggtg acgatcacca 120

atgtgggcgg cgccggcgac atcgcggcgg tgtcggtgaa ggggagcaag cgtgtcaagt 180

ggacggagat gaagcgcaac tgggggcaag tgtggcagac cggggaggac ctcacctgcg 240

agtcgctgac gttccgggtg atgaccagcg accaccgcaa ggccacctca tggcacgttc 300

tccccgctga ctggaagtcc ggtgtcacgt accaggcatc caagaacttc taagtagcca 360

cttttctcc tcttcttcaa cctgcatatg cccacaagca accatgcaaa tgataacatg 420

caat 424

<210> 1084

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-H4

<400> 1084

gggacgactc agacgtgtac aagtgtctac acagctgtctc ggacgacgtc gaggaggccg 60
 tcgcccacct caacggcctc gtccgggagc ccaccgacgc caagttcctg gagctcaagt 120
 cgtggctctc ctccacgtc ggcgccacct ccacctgcga ggacgcctgc aaggacctgc 180
 ccaagaacgg cgacaaggac gacgtcgtca acttcagcct cgacttcgag aagctgcagc 240
 gcgtcacgct ggacctcatc accgaggcat ccggatccat gtccgcaggc atcgccctgc 300
 caccctccaa cgccggagcg ccctcctacg gggcgggcgc gccgttcgga ggtgccgcgg 360
 acgcacccgc cggcacctcc gagggccctg ccagcgccag cgggccatc 409

<210> 1085
 <211> 453
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-C12

<400> 1085

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 tcttgggcag ccgggtgaag acagcgatgg agccgcggtc agagtcggag cagccgcggc 120
 gccgggaggt ggctcggagc aacgacgtga tcgaggcggc acgcaccaag ctgatgcaga 180
 agcgccagtg cagcagggtc aaggcgctcg tcggcgctt cgagactgtc atagacaccc 240
 agaaggacgc cgccgccggc aggccacaac acatctaccg caagtcagct taaaacatac 300
 tgccgcggcg gggacgcacg gacctccac gcttcgtgtc ttgccttaa ttaattaatt 360
 aattgttatg atcatgtcgg ccagcccaac gccgtatgca tgcattgaca cggcgctaatt 420
 taatccctgt ttatttacta ctccgtgaaa tgt 453

<210> 1086
 <211> 324
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-C2

<400> 1086

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 cagcgctgc acaccctccc gccgctgccg ctgcagaacg gcaccgccgg tgacgacgac 120

cgcgacgaag acgttgatga ggacgaagtg ggcgatggcg aagccatgga ggaggatgac 180
aacgaccatg aggacgatcc gccggtcaag tatcagcggc taagctgcaa cgtggcgcgga 240
atggctctcca tggacgcagc tgttgacatc gccgtcgccg aacgcattgt cgcgctcggc 300
actcacagag gaactctcca catc 324

<210> 1087
<211> 427
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-061-Q1-E1-A3
<400> 1087

gggtcgaggg acgagtcacg tgggtccagct caatattaca gtcgtgaaag gtactaactt 60
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agctcaatcg acagttaaaa aaagtgatct taatccggta tggaatgaaa tgcttaagat 180
ttctgttcct cgaaattacg gacctctaaa acttgaagtg tatgaccatg atacgttctc 240
agccgatgat atcatgggtg aagcagagat agatctccaa ccaatgatca cagccgccat 300
ggcctttgga gatacttcac gtcttggtga catgcaaatt gggcgggtggt tcacgaccaa 360
agacaacgcc ctgatgaaag atagcacagt gaatgtcggt gcaggcaagg taaaacagga 420
ggtgcac 427

<210> 1088
<211> 434
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-061-Q1-E1-A9
<400> 1088

cgggtcgacc caaacgtcca gcgacacctg ccgcgccggg ttcgtgacca atgtcaccga 60
gtacatcgcg ggcgccaagg tgaggctgga gtgcaagcac ttcggcaccg gcaagctcga 120
gcgctccatc gacgggggtga ccgacgggaa cggcacgtac acgatcgagc tcaaggacag 180
ccacgaggag gacatctgcg aggtggtctt ggtggagagc ccgcgcaagg actgcgacca 240
ggtgcaggcg gacagggacc gcgccggcgt cctgctcacc aggaacgtcg gcatcagcga 300

caacctgcgc cccgccaacc cgctcggcta cctcaaggac gtgccgctgc ccatctgcgc 360
ctcgtgctc aaacagttgg actcggacga cgacgacgat cagtaatagc acatcgacga 420
cgacgatcga tatg 434

<210> 1089
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-B1

<400> 1089

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ccactctcaa ccgagccata tccaaagttc tcaacatcgc ttcgtgcage ctgcatcggt 120
cgacgagggc tgcacgaacg atgggggtccg cctccgcctc agtgacgaca accagcctgc 180
tggcgctggc gctggcagcg ctggccttcg tctccagggc cgcgggcgag ggcaacggct 240
gttccagcgt gatgatgacc ctggccccgt gcatggactt catctccage aaggcgtctg 300
agccggggat ctctgctgc tcggtgctgg ccggagtcgt gcagaccgac ccccgctgcc 360
tctgcatggt actggacggc actgccacgt ccttcggcat cgccatcaac cag 413

<210> 1090
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-061-Q1-E1-B12

<400> 1090

tcgcgggtcg atacaagact ctacatcgct tcgcagaatc tcgtcgtcgc cttggcgacg 60
tgtacaaaca agtctgttga tgcccgctg gtccaccca tcgtaccct cgaggccgat 120
ggctcatctc ccacctctgg cgatggtcgt cgctgatca gctccaccaa ccaagatgaa 180
cttgagcgt tatgccaaca gatgcactac aagacgttgt gctccacgat gacgacactg 240
cctggggtga ctacgccaga gcaactctta gatgcatccc tcgggattac agcggatgaag 300
gcagcgatgg cggagatgaa gctagacaat gcaataaaat caggcagtgc tcagggtaac 360
ccgatgatgt cgtcgctaaa gacatgcaag gagagctacg cgtcgctggt agactccatc 420

<210> 1091
 <211> 435
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-061-Q1-E1-A11

 <400> 1091

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 cccttcgggt ccggcaaacc acatcaagtc gcgatggaga tgaagaaggt cgctcgcgcc 180
 gtectcgccg ccgccgcctc cgccaccgtg gtectcgccg ccgaggcccc ggcgcccgcc 240
 cccaccagcg cctcctcggc cgcgttcccg gccgtcggcg ccgtgctggg cgctccgtg 300
 ctctccttct tcgcctacta cctgcagtaa aattaaagga gggtcggagg gagatgctgc 360
 tggctgccat tgcctgtatt cggttggatt ccgtttatat atatatttaa gtactttaat 420
 ttgggtctga aaatg 435

<210> 1092
 <211> 315
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-060-Q1-E1-H1

 <400> 1092

 ggggggaacc caggctgaga agcccgctgg gggggcctaa ggcgaagtcg ccaccgaaca 60
 agattgacgt tgtgaaggac aacgacatgt ggagtgctt gaaccagtgc gccggggaga 120
 tcgatgaggc gctggaccac ctggacgaca ccgaaggctg cctcgacgac ggcaagctcc 180
 acgacgtgaa gctgttcctg gacacggcgg aggaggacac gtggtcctgc gacgtctgct 240
 gcaagcacgc cccatccacg cccgtcaaaa ccacgtgct cgccaagaaa aaggacttcg 300
 aggcgctcat gcgcg 315

<210> 1093
 <211> 435
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-060-Q1-E1-H10

<400> 1093

ggtccagggt ccacccaccc gtccgcggac gcatgggcgg gagcacagag ctagctagcc 60
agccagccag cagccagctt gctcgccgcg cncgtccttc ttcctcgctt ccgttccatt 120
ccgtcncgcc ctccaccgcc gccgcgcgat tcagggatgg agatgaagaa gatcgcttgc 180
gccgtcctcg tcgcgccttc ggccggccacc gtggcgctcg ccgcggaggc tccggctccg 240
gccccacca gcggctcctc cgccgtcgcg cccgccgtcg gcgcgcctt cggggccgcc 300
gtcgctcctt tcttcgcta ctacattcag tgagccggcc ggggcgccc gaggcgagg 360
aagagacgaa ggggagagag agtgacatgg ctgcgcgat tccgatgcgt gggcatgttt 420
tttgattcga cacac 435

<210> 1094
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-H11

<400> 1094

gtcgatacac gcctctacac acacttctgt taatatacta actcgaccca agatttaata 60
aagtcaaggt acccaaaaac aaacccatgg gatataatgc ttggcatgaa cctctggggg 120
accatatata atgctgtaat tatgtttgtt gcgccattac tattcagtaa ctggccatat 180
gcaaattggtt ttgaggcatt gagattttgc caggagaacc cagagggtggc ctgggacatt 240
ttcctattct gcctatgtgg cgccgtgggg cagaacttca tcttcttaac catcagccgg 300
tttggctctc ttactaacac aacaatcact accaccgta aattcatgag cattgtggtt 360
tcatccgtca tcagtggcaa tccattatct ttgaagcaat ggggtagtgt tgtgatggtc 420
ttcttaagcc tctctatcca aatata 446

<210> 1095
<211> 407
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-H2

<400> 1095

gggtcgagca cgcgtccgct ctcaactgtct cgcggcccgg ggaaaaagga gggctccgcg 60

gtccccgggg aaaaccccg c aattgcggcg gccgccctga cgggggaaaa tggttgcca 120

gaattcaaaa ttgatctcaa cagccccctt gttttccaag tttgccatct tgaggaacgg 180

taccaggaat gggttcacca accgatcgtc agcaaggagg gtccacgctt tttcggaaat 240

gatgtcctgg agttcttgac tcgcacgaag tgggtgggctg tgccaactat atggctgcct 300

gttgtctgct gcctgctcgt gaaatctatt ctgatgggctc atactgttca ggacgtagct 360

atgatggctc tgtttgggat atttatttgg acgctgatcg aatacac 407

<210> 1096

<211> 273

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-060-Q1-E1-H4

<400> 1096

cacgccaaag cccctgacgc ctggcgggcg cgtggtacac gacaaccacg gcaagttcac 60

ggccggggccg tggaaacct gccacgcgac cttctacngc gggcgggacg ggtccggcaa 120

cacggcgggc gcgtgcgggt acaaggacac gcgcgagcaa gggtaacngc tgcagacggt 180

ggctgtgagc acggtgttgt ttggcgatgg cgcggcctgc ggcgggtgct acgaagtgcg 240

gtgcgtggac agccccagcg ggtgcaagcc cga 273

<210> 1097

<211> 208

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-G1

<400> 1097

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caatgtgtgc cgcggtgagg gcttcttggc cggcaggtgc agcaccttcc gccgccgctg 120

catctgcact acgcaatgct aaacaagatc gctcgatcgc ttgccatgca tcgacaacct 180

attcttaata acgttcatta tctcgttc

208

<210> 1098

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-G4

<400> 1098

ctccctgggc ccaacaagtt caatggccac caaaggcaac cccgggcccgt caacccccgg 60
aaaaaaggat tctgaaggca taccggtgaa aaaaaccgga aaggccctgg taatcggaat 120
ctacaacaag cccatgaccc ctgaacattg caacatggtg gttgaaaggc tcggtgacta 180
cctcttaaag caaggcctgt gaatgcatca aaacaacgac accaacgcca aaattaatta 240
attagtagtc tcaatgcctt gggattgtgc gtggccgctc cgttgaacac caccatcct 300
tcgttcggca ttttttcccc cctttgttta tataatttat tgtatcgttt tggcaaataa 360
ttttgtgatt cgaccccaaa gcaagtttgg ttgtcctacg aattgtaaac ctgggacaat 420
atataatg 428

<210> 1099

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-F1

<400> 1099

ggtcgaaata ccgggtcgac cacgcgtcgg ggggtcattc gccatcctgg cccgggggaa 60
aggggggtcc ccggtttgaa tagttgattt ccatttcagg gtgcgcatct gaagggtgcg 120
ccagggtgctc ttgctgtgtg atctttgtcg ccttgtgacg ctggggaccg ggttattggc 180
gggagtttgt cagaataata cataaagaac tgggtgccacg agatcggggg acttcagatc 240
agggaaacct tgagccatgg gcacagttgt ggatgccgct ccagcagttg tggctgaggt 300
cactgagaac atgttgggtg gcaagaaagt tacagttgta tttgtcctaa gtggtcctgg 360
aagtggaaaa ggcacacagt gtgccaacat cgtggagcac tttggattca cccatcttag 420
tgctg 425

<210> 1100
 <211> 384
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-060-Q1-E1-D1

 <400> 1100

 tcggcaacca ccagaactcc aaccgttcgg ccctggaacc ttaagcctct tcgttcgggc 60
 tccggaatcc aacggcggcg ggaaaaaacg ggcaattccc aaaacaggaa ccgaaggaaac 120
 aaggttgag gataaccccc cgctaacaaa aacaataaag ggtgcggtaa aaggaccccc 180
 cccggggaac atctggggca ccgtcgtcgc cacctggtac gacgtgcccc gtgtggagcg 240
 ccacgtcgcg ctccctggcc ttatccggac gctcaagatg tgcggcacct acggggccac 300
 cttcgccacc atcggggggc tctacatcgg cgtcgagcag ctctgcaga gccagcgcaa 360
 gaagcgcgac ttcgtcaacg gggc 384

<210> 1101
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-060-Q1-E1-D4

 <400> 1101

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 tggaaaggat ttccccaacg gttcaaaaa cttcggcaac aagggcggaa acccgagca 120
 tttcgacca agcataaacc cgtcctacgc caggngctg caggacgtgt gcagggacta 180
 cctcaaggga ccaccatcg ccgcgttcaa cgacatcatg acgcccggca agttcgacaa 240
 catgtacttc gtcaacctcg agcgcggcct cggcctgctc agcaccgacg aggagctgtg 300
 gacggacca cgcaccaagc ccctggtgca gctctatgca tccaacgcca cagccttctt 360
 cgacgacttc ggccgcgcca tggagaagct c 391

<210> 1102
 <211> 403
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-060-Q1-E1-B1

<400> 1102

ctccaactaa tcccggttga gtggcggctt caaaagtga gttctcccct tcaacaaacc 60
caagttggtt aacaacaaca agggcggagt tggtaacgtc aacttatcca attgaggtcg 120
gcaacttcaa gaacggaagt cctctcaaca caagcccaag ttagctcaca catcagcggc 180
aagtcgtcan ctcaactgct cctgtaagct tgccacctcc tgaagtaaag tcttccccac 240
caccagcacc gattagctct ccaccacctc cggccaagtc accacctcca cggggcccta 300
tgagctcact tcttccccct gtgaagtctc canctccacc agcgccggtc agttcgccan 360
canctccaat gaagtcccaa cggcggcagg cacaattagc tct 403

<210> 1103
<211> 389
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-060-Q1-E1-C1

<400> 1103

actcctcccc aagaaaactg gaattaaccg gcaattttat tgaaaaggga aatgaaaagg 60
aaggccaacc aaaaattaag cggtagatga caatgatgga ctccatgacc gatgcagagc 120
ttgacgggac ggacccaaag ctgatgaacc agtcacgaat caaccggatc gctcggngat 180
ccggcangcg cgtggaggaa gtggtgcaca tgctggacga gtacaagcga attgccaagg 240
tgtggaagaa attgccagtg ttgaacaaca acaggagatc ggatatgaac cgcgacatta 300
ngcgcataag cgatgcgatt cctcccaata tgctgactca gcttggtggc atcgctgggc 360
tgcagaatat gatcaaaca atgggcggg 389

<210> 1104
<211> 308
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-H12

<400> 1104

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 tgggagcgaa ttttagactg tgggttaaaaa actctcctcg tctgtctcac gctaaagcac 120
 aggtctaagg cttacctcgg gtcgtgggtcgt ttctcacatg ggcttcaatg ccgctgtcgt 180
 accccccac tccccagcgt acgtcatcgt caatttggtc acacatgcga ctatccatgc 240
 tgatatggac ggcgtcatg tagtctattc ctactaagtc tggcattttc cagggctaag 300
 tgtttttt 308

<210> 1105
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-H3

<400> 1105
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 tcgcgtgggg cgcgctcgggtg gacaagggca ggatggcggg cgtggactac cacctgcgcg 120
 cgaccacgac ccccggaag gtgttcgggt tcttcggcgc gctgggcgac gtggcggttcg 180
 cgtacgccgg gcacaacgtg gtgctggaga tccaggccac catcccgctg actcccgaga 240
 agccgtccaa gaagcccatg tggaagggcg tcgctcgtcg ctacgtcgtc gtcgcgctct 300
 gctacttccc cgtcgcgctc atcggtact gggcggttcg caacagcgtc caggacaaca 360
 tcctcatcac gtcagcaag ccaggtggg tcaacgcgct cgccaacatg atggtcgtca 420
 tccacg 426

<210> 1106
 <211> 373
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-H4

<400> 1106
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 tggacggatt ggtaggcctc ttgaaagtcc ggggtggtgag gggcatcaac cttgcctacc 180

gcgacgcaag aggcagcgat ccgtatgtcg tcctacgact tggcaagaag aaacttaaga 240
 cgagcgtgaa gaagagatct gtgaacccca tctggcacga ggagctaact ctgaccgtca 300
 cagatcccgag cctagctctg aagctggagg tgttcgacaa ggacacgttc agcagggacg 360
 acccgatggg gga 373

<210> 1107
 <211> 440
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-060-Q1-E1-A11
 <400> 1107

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 acaggcgtgg ggaagtcatt cctgctgctg cagttcacgg ataagcgctt ccagcccgtg 180
 cacgatctca ccatcggcgt tgaatttggc gcccgcatga tcaccatcga caacaagccc 240
 atcaaactcc agatttggga cacggctggc caagaatcat tcagatctat tactaggtca 300
 tactacagag gagctgctgg agcccttttg gtttatgata tcactaggag ggagaccttc 360
 aatcatctcg caagttggct agaagatgcc aggcaacatg caaatgctaa catgacagtg 420
 atgccgattg ggaacaaatg 440

<210> 1108
 <211> 414
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-060-Q1-E1-A3
 <400> 1108

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 ctctagccc cggtagcagc gctccgaacg aagagagcaa ccctgcggca gcgagcaaga 180
 ggccgtatct cgagaggaac tactccgtgc tggaaccttc agaagggagc cagctcgccg 240

acgacgtgga aggggaaagc tctctcgaga acgtgaagaa acagctcgag ctcaacaaga 300
aggcaatggc cgctctttac aaggagcttg aggaagaacg gagcgcttcg gcggtcgcgg 360
ctagccagac gatggccatg atcaataggc tgcanganga gaaggctgca atgc 414

<210> 1109

<211> 110

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-060-Q1-E1-A5

<400> 1109

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tgatattgac tctatagttc atggagttaa ggatgtcata atggggggggg 110

<210> 1110

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-G4

<400> 1110

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tgctgggtgc gtccggagaa catgaaggcg ccgcgcacgc tgtacgagat cgactcgaag 180
acgcccggga cggagatcgc cgccgagacg tcggccgcgt tcgccgcctc gtccatggtg 240
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ttcgccaaga gccacctggg cagctacgac ggcgagtgcc ccttctactg ctctactcg 360
ggctacaacg acgagctgct gtgggcccgc acctggctgt acctggcgac aaggcggcag 420
gtgtacgcgg acttc 435

<210> 1111

<211> 198

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-G6

<400> 1111

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atatcagaca tcgacgccga cgcagctgcg acgaagaccc tgatgggcac gtacgatgtc 120

aggacgacca tccgacaggg caggttcccc aaggtgaaac acgcgcccga ctctcacatc 180

cggtcatcc gcaccatc 198

<210> 1112

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-G7

<400> 1112

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gccgccgcaa ccgcgagact atccatgggc gcctacgcaa ccaatcgcaa gactcttgat 120

gggcatgacc gacttgacgc cgtcgtctcc acacacaaag ttgcgcccga cgccattcca 180

gtctcagttg aagttgcggc tgatgaaaag gtacatcata acgtggtgct ggatg 235

<210> 1113

<211> 431

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-059-Q1-E1-F12

<400> 1113

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gctctgcctg ctctctttct ctggccgtct cgccgcggcg gagaagactt tccgcggagg 120

cggaggcgga ggctacggcg ggttgaggc cggtggcgga ggccggcgcg gcggctactc 180

caccccgagc gaggcagcgc catccacgcc tgccgctggg gagacgacga ccccttcgtc 240

aggcggcggt tactccaccc ctagcgaggc agcgccatcc acgcctgccg ctgaggagac 300

gacgacgact ccttcgtcag gcggcggggg ttacggcggt gcaaccggca aggcttcctc 360

aggcggcggc gggctggacc ccgacggcga ccagaggtt gggctgaacg ggaaggcgat 420

cgangagatc g 431

<210> 1114
 <211> 384
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F2

<400> 1114

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ctcctcgctg tcgccgtcgt cctctccaac gtccccctct cggggcgccct ggctctctcg   180
tcgtcgtctc tgctgcacca gtcgtctccg tctgagagtg agactgagac cgacagtagc   240
agcggagaat cttcttcgtc gtcgtcgtcg gaagaggccg gcgagaagga gaaggagaat   300
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tacgccaagg agaagggcac cgtg                                     384
  
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<210> 1115
 <211> 315
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D6

<400> 1115

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agtgagtctt agtattggtg gatcaggaag ctgccgttcg acacgcttgt cacggacatt   60
gctcaagatt tcaagacgga tctgcgcttc tagagccagg ccgtgcttgc tctgcaggat   120
gcagcacacg cctacctggt tgggctcttc gaagatacca gtctgtgcgc gatccatgcc   180
aggcgcgtga ccatcatgcc cagtgcatt cagctggcaa caaggatccg tggcaagagg   240
gcgtatgtct gtcgacgaga tgaagaactc tgcgctcggt ttgtgtgttc gcctctctca   300
ccctgtaagt tttgt                                           315
  
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<210> 1116
 <211> 428
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B12

<400> 1116

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gcgtaccaaa ggaactggat cgagatcgag aacgtcgaga acctgtccat caacggccac 120

ggcaccatcg acgggcaggg agccctgggtg tggagcaaga accagtgccg gcattcttac 180

aattgcaaga tcctcccgaa tagcttgggtg ctggattttg tgacgaacgt ccagatccgc 240

ggcatcacgc tgctcaacag caagttcttc cacctcaaca tcttcgagtg caagaacgtg 300

ctgatcgaca aagtgacggg caaggccccc ggcgacagcc ccaacacgga cggcatccac 360

atcggcgact ccagcaacgt gaccatcagc agcaccacca tcggcgtcgg cgacgactgc 420

atctccat 428

<210> 1117

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B3

<400> 1117

ggtcgagtcg gcgtccgatc ccatgctccg atcgccgtgg agcaatgtca agtcgatgca 60

tcggaagggg ctagagatgt atgacttccg cttcgacgcg gctgattcgg ctgtcaagct 120

tcccagccag ctgcgctgcg ctccgcattg ctcttgatgg catccagtag atctgttcgc 180

cccccaatat caaaggccgg aggaggaata aacgttaggg agtcggccat gggatgcttt 240

tcatgctgct gtgtggcaga tgacgacaac gttggcagga ggaatgagca tgacgatgcc 300

tatgttccta tccctgctca tgtttataat tttggagcta gccggttccc agccccaggg 360

cctggtcatc tcg 373

<210> 1118

<211> 216

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H4

<400> 1118

cacgcatccg cgagaggtga accagcatcc tccaatataa gccagcacat ccaaataa 60

ccgagagacc tcagccctca ggcaagccga ccgccgacgt accaccgcgc caacccgaga 120
gaaagatgga tatgatcaac aggatgctca tcgccgcgct cctcgtagtc accgtctcag 180
ccagcgcatt gctggcctcc atcgaagccg ccgccg 216

<210> 1119
<211> 337
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-059-Q1-E1-A2
<400> 1119

cgggccccc gtgccgtgag caagtccatg cgatcccttg gcaaaacaag ttccccgggt 60
cacgggcatg ccgcatgggg ccggcgctcat ctgcagcggc ttgggcacgg gcgcctggct 120
cagccgcgtc gtttgtgcgc acagtcactg ctgatgattc tcagctgccg gctcactgca 180
ccgtgggcgc gtccgccgaa agccgtccta atcatgcacg caagtggacc actgggcggc 240
cgtggacctc cgggatctct cacgcgcgct tcggctcggc tcaccacagg tgccctacta 300
cggttacttt acgtaccoga gtccattgca ttggttg 337

<210> 1120
<211> 385
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-059-Q1-E1-A3
<400> 1120

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atgaccctg ccagcagcag tagcagcagc cggcgtgtga cgctgggtact gctcggctctc 120
cgctgctgc ttctggttg tgttgcgcan gcggtagtgg agttggtgcc tgctgatgat 180
aatatcgccg ccgccgctgc tggcacggcg gtggacgatg gcgagccgcc tcagcagtgc 240
gcgaccccg tgagcgtgga ggaggcgtgc cgcggcgcgt ccgagacgca cgccggcgtg 300
gcctacgacc actgcatggc gtcgctgggc gccgaccgc gcagcaagga ggccggcaac 360
aagaacatgc acgggctggc ggtgc 385

<210> 1121
 <211> 406
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-A9

 <400> 1121

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 cggccggcgt tccccgtcga ctgtgttcga tcgctagacg ggggtggcacg ctgcgatgac 120
 tacctgtatg gcgagtcctt atacttactc atacataagc tgcgccgccg tgtcgtccgg 180
 acgcgtgggg ccgtgggcga gtgcggcgtg gacgaggagg aggagctcgg gctgagcggc 240
 gggggcggca tcggcgccgg cgacgcgctg cggcggacgc ttgcgcagcg caagccgacc 300
 aaccggtaca tcagctacgc ggcgctgcgc gcggaccacg tgccgtgcaa caagcgccggc 360
 cggctctact acaccaactg cgcggcgcag acggccgcca acccct 406

<210> 1122
 <211> 301
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-H2

 <400> 1122

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 cagcagccgc ccccgctcgc ggtgctggag cgcgtgcgcc gcgtcggcag cggcgccggc 180
 gggacggtgt ggatggtgcg gcaccgcggc acggggcgcc cctacgcgct caaggtgctg 240
 tacgggaacc acgacgactc ggtgcggcgg cagatcgccg gcgagatcgc catcctccgg 300
 c 301

<210> 1123
 <211> 210
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-B9

<400> 1123

acaagcctct acactgagtc gtattaagca atagaacacc cttccgtgtg catcgctcct 60

ccgtccacac ctccctggtc agtcgtatac gaggatcatg ccggctaacg tggacgccgc 120

ggcccagtac cggtaggagg ttgcccttag cagcgttccc ggcgccaga gagtgccggt 180

gtgcagtgga ctgttcggtc atcgaggccc 210

<210> 1124

<211> 183

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C10

<400> 1124

cgcctctaata gtgacttgta ctgcccttgc gctgttgtgg aaggcgtctc cgcttacgat 60

ctttgtcatg ctgatcttgg cgccttggct gggacctcct gccctcgtgg tgttcagggt 120

gatcatcatc acgcagctgc gctgtctgcg gcgtcggttg tgttcgggtg ctttcttcag 180

tgg 183

<210> 1125

<211> 285

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C3

<400> 1125

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tggatcatgt ggaacaaatg acggcaagga cgaattctgg atctgttgtg atagttgtga 180

gcggtggtac catgggaagt gtgtcaagat cactcctgca cgtgctgagc acatcaagca 240

ctacaaatgc ccagattgca acaacaagag ggcaagagcc tagcgc 285

<210> 1126

<211> 231

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C4

<400> 1126

accacccct caacacggcg cacccttcag gcgagacagc agtccgactc gcccccaacg 60
accacgatga gcacagcggg gagcccgatc aacaggaaga gcgaggcaat accttatgtg 120
gatcacgtgg gacacatgcc cgacaggaca agttccggct cagacgagat acttctgagc 180
tgtggtagca tgggaacatg cgtcaagatc acatccggca cgtgcgacag c 231

<210> 1127

<211> 307

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D12

<400> 1127

ctcgcgggctc gacacaagcg tctaaaggga gtcgtattaa agagcaagtg tgatcatccg 60
ttgatacatc ttgctaagaa acctgctgct ccttcgttca cgtcgcgata ccgacgacgc 120
tctcttcggc tccggcaaac cacatcatgt cgcgacggag atgaagaatg tcacctgctc 180
cgtcttcagc agggccgcct acgccaccgt ggtccacgcc gccgatgcta cggctccac 240
cactacgagc accacctcgg ccgcattaca ggccgtcggc tctgtgcagg gagatacagt 300
gctctcc 307

<210> 1128

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G5

<400> 1128

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gggcctagtg ggactgcgcc actgcgatct cgccaccagc ggctccgccc agcagaaaga 120
cattgacctg ctcaggagcg tcgaaggctc tagcgacggg atcaggcccc agtcccaatg 180
ccggttctcc agactgaatg aagctggctg atacggaatc cgatgcaccg gcgcctgcgc 240
cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc gttcagccaa gcaaagtggc 300

caaaaccgag aactaattaa tgggtccatc gtgtgtcagg ctactattgt tcttgccata 360
 agtatatata gatgcgcaaa gtg 383

<210> 1129
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G9

<400> 1129

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 cacggcatca gcatcggaag cctagggcgg tacaaggacg agaaggacgt cacggacatc 180
 aacgtcaagg attgcactct taagaagacg atgttcggcg tccgcatcaa ggcgtacgag 240
 gacgccgcct ccgtgctcac cgtctccaag atccactacg agaatatcaa gatggaggac 300
 tcagccaacc ccatcttcat cgacatgaag tactgcccc acaagttgtg tactgccaac 360
 ggcgcccca aggtcacctg caaggacgtc accttcaaga acatcacccg cacctcctc 419

<210> 1130
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H1

<400> 1130

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 catgaaggct gacaaaggcc cttggaagga ccccgaaatc atgaagatgg ttcaaagtgg 120
 tgatgggagg tgtggatcac tcggtacggc ctctttcgag gctccggaga aaatgatttg 180
 tgaagacgac acgtatccta agaaacaagc tttgtttgat ggggaaacac aattagctgg 240
 agacgagcat tctcagtcac agaaaatttc ccgtggccgg attgaacatc ctacagtgtc 300
 acctcttcac gaggaactta tccccacttc aattcatacc cctggattac cctattcttg 360
 tgatgtcccc atggttgaag aggccataga cgccatctgc aagagccacg gaacaccacc 420
 ag 422

<210> 1131
 <211> 408
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H2

<400> 1131

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cctaccccat catcatagac cagaagtact gcccacaaca catctgcgtc aagtccggcg 120
cctccaaggt ggccgtcaac gacgtcgtct tcaagaacat ccacggcacc tccaacacgc 180
cggaggccat caagctcaac tgcgccaaca acctgccctg ccagggcggtg cagctcatca 240
acgtcgacat caagtacaac aggtccgaca acaagaccat gtccgtctgc aagaacgcca 300
tcggcaagtc cattggcatg gcgaaggagc tcgcctgcgt ctgaacctac ttgcatccat 360
cactcactct tcgtcacctc tctctttctc actctcgcca gtcttttt 408
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<210> 1132
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H8

<400> 1132

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gaccacgcgt cagcccacgc gtccggctac tcagagggac actgtctcgg cccggccaat 60
tgcccgccg gaccttcgcc catgatcaca gggagaacat cctttgcttc ccatgggcat 120
gaagaataac caagactccc agttgggtcat gggccggtac aggctggggc aactcctcgg 180
cagcggcaac ttcgctaagg tgtacaaggc ccataagggtg gccaccggcg aggctgtggc 240
cgtcaagggtg ctggacaagg atgctgtgca ccgctccggc atggcggaga aggtgaagac 300
cgaggctgac gtgatgcggc gcgtgcgcca cccgaacgtc gtccgcctcc acgagatgat 360
ggccacgcgg tccaagatct acttcgtcat ggaatacgcc agcggcgggg agctcttcc 419
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<210> 1133
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F12

<400> 1133

gaatcgtatt ataaggtccc gcccttttcc gacattcaca ggggggacag gaaatcagcg 60
gccatggcct cgattccggc gacgaccttc gccgtcatct tagccgtcct cttctgtgcc 120
gcggctggca ccgccgtcga caacgacctc cccgactacg tcatccaggg ccgctctat 180
tgcgacacct gccgcgccag gttcgtgacc aatgtcaccg agtacatcg cggcgccaag 240
gtgaggctgg agtgcaagca cttcggcacc ggcaagctcg agcgctccat cgacggggtg 300
accgacggga acggcacgta cacgatcgag ctcaaggaca gccacgagga ggacatctgc 360
gaggtggtct tgggtggagag c 381

<210> 1134

<211> 135

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F4

<400> 1134

gtattatggc acgctgcggc acgccgtgat ccaggaccgg ccgctgtgga tcgtgttcgc 60
gcgcgacatg gtgatcgagc tgccgcagga actgatcgtg aaccacatca agacggatcg 120
atggtggggg cgcgc 135

<210> 1135

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-D12

<400> 1135

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ccggaacggc actgtcatca tcacgttacg aggtcttcgt cggagcgcgt aatgaggtgc 120
ctgaccgacg aggacctgga cgagctgcgg ggctccttcg agctcggggt cgggttcgac 180
gaggagtccg gcgggcacca cctccgcgac acgctccccg ccctcgactt ctacttcgcc 240
gtgaaccgtc agctgtccga ccccgccaag ctgcggacgc tgctgtcggc ggcgagcctc 300

acgtccacgc cgtcggccgt gtcctcgtcg tccacgtcc cgcacgtccc gaacgaccca 360
cgcagcccca acgtcggcgc aaccgccgcg tctggcg 397

<210> 1136
<211> 329
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E12

<400> 1136

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taacctcgcg tgccttcgt tcggtctcg atgccgacga cgtcccttc ggctccggca 120
aaccacatca attcgcgatg gagatgaaga acgtcgcgatg cgcgctctc gccgccgcg 180
cctccgcgac cgtggctctc gccgccgacg gcccggtcc cgcgccacgc agcgcgctcc 240
tcggccggcg ttcccgccg tcggcgccgt gcggggcgcc tccgtgcgct gcttcttcgg 300
ttagtagctg cggtaagtgg taggggagg 329

<210> 1137
<211> 256
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E2

<400> 1137

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cgcccgccgg agctgctcct gggcgccacg gcgtacgagc cctccgtcga cctctggagc 120
gccggctcgc tcttcgcgga gatgcacgcg cgccggcccc tcttcagagg ccgcaccgag 180
gtcgagcaga tccacaggat cttcatgctc tgtggctcgc cgcgccgaaga cctctggcgc 240
cgcttggggc tctccc 256

<210> 1138
<211> 435
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-057-Q1-E1-E3

<400> 1138

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ataccaccac cgtagcacca cacgcaggta cgaagaaggc gacgaacatg gcgaggctgg 120

ccttggtagc ggcggtggtt ctgtgcctcc tgttagcgac agggccgcan ggggccatca 180

gcgccgaggg gatggtgtca ttgacaatt tgatcagctg caaggtactg ggcaactgcg 240

acaagaacct gggccccgag gcctccccgc cagggaacc cgccaacgac tacacccgcg 300

gctgcaacct gatcacggc tgtcgcggct gatcatatct ctctggtcga tgtgcgcgca 360

atgtcaatgt cgcacgcgcg tgcaggtaac aggcctcagc gtgtggtgcc gcgtgtgtgt 420

atatattaca cacat 435

<210> 1139

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E5

<400> 1139

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gaaaatgtcg cgcgccacag ctgcggtcct cttctacatc ctgcgcgtcg ctgccctcag 120

cgcggccggt gcaccggcag agtcaccgag ggcaggcagt cctgccaagg caccggccga 180

gtcaccgaag gtaggcagtc ctgcagctcc tgccagggca cccagagtct gctgccacga 240

gaactgcccc cgcgaaagca gctcaggccg actcgagcac cgtcggatgc ggctgtaggc 300

atggtcgt 308

<210> 1140

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A8

<400> 1140

acaacactct atagtgcgt cgtattaagc cctcagaatg gcatcaacac gtgtgatctc 60

caccttgagt atagcggcag caactaggca ggaccacggc gatatgcaca aactcgacgg 120

gcagcacaaa tgggtgactc accgaacttg catgcttcaa aacactgtct cgactgacgc 180
atctcactac ttatcagtta tctcacgtcc ctgcattgca tatcatgtgc tatccattgg 240
ttacccacaa cagtataacg tacaacatcc agcagctata ttatgttcta cagtgttaaca 300
ccctgaattt tacggtacaa aatttcatct ttaaattgcaa accacattca ggtgttacct 360
cttgtctctc tctctatctt ttc 383

<210> 1141
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B3

<400> 1141

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ccctccacct cgacggctac gccttcttcg gcgtcgggat ggggcctggg acgtggctgc 120
cggagatgag gaagacgtac aacctactgg acacggtgag cgggcacacg atccaggtgt 180
acccgcggtc atggacggcg atcatgctga cattcgacaa cgcgggcatg tggagcgtcc 240
ggccaacgt ctgggagcgg tactacctcg gggagcagtt ctacatcagc gtcattctgc 300
cggcgcggtc gctgcgcgac gagtacaaca tgcccgacaa cgccctccgc tgcggcaagg 360
tcctggggct gccgtgccg ccattcctacg ccccgcgcg ctaa 404

<210> 1142
<211> 399
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-B9

<400> 1142

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accaaataag gtcccgccct ttccgacat tcacaggggg gacaggaaat cagcggccat 120
ggcctcgatt ccggcgacga ccttcgccgt catcttatcc gtcctttctt gtgccggggc 180
tggcaccgcc gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgcga 240
cacctgccgc gccgggttcg tgactaatgt caccgagtac atcgcgggcg ccaacgtgag 300

gctggagtgc aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggtgaccga 360
cgggaacggc acgtacacga tcgagctcaa ggacagcca 399

<210> 1143
<211> 149
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C1

<400> 1143

gcgtccgaaa ggaactatat actcaccocg gtcatatgat tggtaactga aaatatgact 60
cttgtgctgc ctaacctggg ggctattaga ttatgttggg actccaaaga catgatttag 120
aggttaagaa tttgaatcca agtttggac 149

<210> 1144
<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C2

<400> 1144

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tgagaagcgc cttgagatca cattctctga ggcacctgtc tttgtggacc ctcatgggag 120
tggtttgcgt gccctctcca gggcccagat tgactctgtt ctggatcttg cacggtgcac 180
aattgtgtct gagctctcca acaaggattt cgactcatat gtcctttctg agtcaagctt 240
gtttatctat cctctgaaga ttgtcatcaa gacctgtggc actaccaagc tcctgctcac 300
cattccaaga atccttgagc ttgtgaaga gctgtctatg ccacttgctg ctgtgaagta 360
ctcccgtggg acgttcatct ttcctggcgc acagccagcc cccacagga gcttctctga 420
ggaagttgct 430

<210> 1145
<211> 244
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-C3

<400> 1145

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agcggatgcc atggaggaga aggcgggagt gcttgatgag taagacgggc ttctggggtc 180
gatttgcttc tgagttgttt attttatatc gtcgcaattt cgtggttgct gtttggttat 240
tctg 244

<210> 1146

<211> 330

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C4

<400> 1146

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agaacatgga gattgcatca cactctatga agaacgactc catgctggct aatcttctct 120
tctgttacgt ggaatctgca gcgatgaaag agactgtggg agtgattgat cactgtgaca 180
ggcttcatcg gtccacttgc ttctggattg cgaatcatat atcgtctcaa attcgtgctt 240
gtcgatcgat tattcgggtga ttcacacaag cactgtagt gttatcaaaa tttggcgtcc 300
gtgtccatgt aaccttcagc ttttgcaaca 330

<210> 1147

<211> 239

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-C5

<400> 1147

tgcattgact gcagtgcgta agcagactgt gcgtgcctgc ccacgcaatt cgacagcaca 60
ccgatctcga tggagctgtg atcgtgtcca ctgatcgag agatcgattg atgcttgaga 120
ttaaatttgt agtccacatt atatataaga gatacagctt aaactaaatt tattccatca 180
agcacgaccg ccgcaccacc gaagtcgtcg ccgtcaagta cagcgagcgt ggaaaaagg 239

<210> 1148
<211> 99
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H11

<400> 1148

acaatacaag actctaaatt gagtcagaga atggatggcc ctctgctttg tggaccaaaa 60
agtgggttcag gaatagcaat cagttgggct acattttttt 99

<210> 1149
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H12

<400> 1149

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aggcaggcag gaaggcaggt tcgaggaggg attggctccg ctctgctcc attgcgcgtg 120
atccggctcg ttcttttgat tgatctaggc gtttcttgga tgtcctggaa ggtcaaacgg 180
ttgttggaag cctcgctggg tgcttcaacg aacgcgaagg tgttgctgtc atttagagcg 240
tcttgattgg atttgacctg ttggcctggt ggcgtgccgt cgttgattga gctcgaggat 300
gatcaagtgg gggctcagca gcggcacgcc cgcggtattcc tactacgagg tccggtcaga 360
ttgcacggac ggtgtgccca agagcaagtt caagat 396

<210> 1150
<211> 312
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H2

<400> 1150

gtgatgtcaa tattatgccg gtgcggtctc cttggtccca gactctgcgg aaaatgactt 60
tgatacttct catgctactg gcttttctaag cagctccgcc ggcgagcgcg gtgggtccgcg 120
gtgacgagtg ttatcaggtc tgctacccag tccacatgat tggcgtagga gtgatgtttc 180

gaggtgaaag cagatctctg ctagccacgg gcccatggac atttacaggg atcacgcttt 240
 tgggttccta acagccacta ttgtttccta tatcatttgc ctagccatgc atgtcttgca 300
 ttgcgttttt ta 312

<210> 1151
 <211> 441
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-056-Q1-E1-H6

<400> 1151

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 gcggcggtgca cggctattgg cttcgtgttc tgctcgattg cgccccccac cctcctcgg 120
 tagcgcgcaa gatgaatgaa gattggctct ggtctgggtg gcgtatcagt agatttcatt 180
 ttcattgcga gtgtgccgtt ttctttgaat tcttgggagg gttcgagtga ggttttgggg 240
 tttcgccctg ctttcanggg cgggtgtgtt ccgatgacgt ctgccaagta gtaattaatt 300
 ttacaggatt anttttgggt ctgtttcttt gaatgataaa ccgaaatcct tgtttttttt 360
 tgaaaggatt aacatcatat tgctttttta gtgctgtttg gttcatcaac ggtaacatat 420
 atagcaacag taatgattca t 441

<210> 1152
 <211> 249
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A1

<400> 1152

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 gcgctgctgg tgatgcctt cctggcgggc cagctggtgg cgacgtgcat cgccgtgtac 120
 gccaaactggg agttctgcaa gatgcacggc atcggctggg gctggggcgg cgccatctgg 180
 gcgttcaacg tcgttgcgta gaccccgctg gacgtcctca aatccgccat ccgcgaggcg 240
 ctctccggc 249

<210> 1153
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A2

<400> 1153

acgcgtcaac atgaactcat tggatgttgc aaaaggcaaa taaagaagaa aacaaatatc 60
acaaatgcag tggatatagaa ccacaatata tggttcatga taggcaaaca tacttacttt 120
tagttcaggt tattgagatt tgtgctggac gaattgggtga ggctgtgtca atgataaaca 180
acaaggataa tgattggttt attcaactca catgtgccta cttgtacagt ctttaaccata 240
gggattttact gtcccaggat actatgaaga attaagccag aattaaattg gatttaaaaa 300
ggacatccaa ttgaatatgc aagagcttgc tcaatctctc cttttgagat gtgatgagaa 360
aactagcaat aagaagacca agaaaacctt atgggatgtc ctaagaagtt tatactatgc 420

<210> 1154
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A3

<400> 1154

cacacgtcca ggactggctt caaaaaaatg caaccaaaaa cttccgaccg gacagccttc 60
ttgggaaagg agggtttggg catgtctaca aaggttggat tgatgagcac acgcttgctc 120
cttcaagacc tgggagtggg atgggttgtt ctgtgaagaa gcttaaaccg gaaggttttc 180
aaggacacaa ggaatggctg acagaggttg attaccttgg ccaacttcac cacaagaatc 240
ttgttaagct cattggttat tgctcagatg gtgacaaccg gcttctgggt tatgaattta 300
tgcccaaggg aagtttggag aaccatctgt ttagaagaag tgctgatcct ttgtcatggg 360
caataaggct caaagttgcc attggagctg ctaggggctt gtcattttta catgatgctg 420

<210> 1155
<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-A4

<400> 1155

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ggcgtccggg ttcattctgca agaacatggg gtccacaaac acggccggcg cggagcggca 120

ccaggcgggtg gcgctccggg tgcaggggga cctcggggcg ttctacaact gccggttcga 180

cgcgttccag gacacgtgt acgtgcacgc gcggcggcag ttcttccgca actgcgtggt 240

ctccggcacc atccattca tcctccgcaa ctccggcgga gtgttccaga actgcctcat 300

catcacggg cggcccatgg acaaccatca gaactcgggt acggcgcacg ggcgcaccga 360

ccccaacatg aagtccgggc tcgtcatcca gaactgccgc ctgggtgccg accagaagct 420

gttcccgga 430

<210> 1156

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-H10

<400> 1156

tctaaattga gtcattattac gcctgcgtca cccaccata tccggccagc ccaacgaaaa 60

tgtcgcgcgc cacagctgcg gtctcttctt acatcctcgc cgtcgtgcc ctcagcgcgg 120

ccgaggcacc ggcagagtca ccgaaggcag gcagtcctgc caaggcaccg gccaggtcac 180

cgaaggcagg cagtcctgca gtcctgccca aggcaccgga gtctgctgcc acgagaactg 240

ccccgctaa ggcacctcaa gccgcctcca ccccgccgc tgccgtgcc ccatcgtcgt 300

cgctgtctag gaagtctggt ccagctgccg cgccgaccac cgccgcctct acaccgtctt 360

cttcacgga cgaggagttg agcccttcgc cgtcggcatc caccgccg 408

<210> 1157

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F9

<400> 1157

ctcgcgagtc gacacagcc tccaaaggat ctcagcatag acttgattta gttatggacg 60

gattggtagg cctcttgaaa gttcgcgtgg tccggggtat caaccttgcc taccgcgacg 120
 caagaggcag cgatccgtat gtcgtcctac ggcttggtcaa gaagaaactg aagacaagcg 180
 tgaagaagag atccgtgaac cccatatggc aagaggagct aactctgacc gtcacagatc 240
 ccagccaacc actgaagctg gaggtgttcg acaaggacac cttcagcaga gacgaccca 300
 tgggagacgc ggaggtggac gtggcgccac tgatggaggc ggtgagcatg aaccgcggg 360
 aggagagtct gaggaacggc gccatcatca ggtccgagcg gccgagcgcc aggaactgcc 420
 tcgccgacga gagcc 435

<210> 1158
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G12

<400> 1158

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 catagacgcc atctgcaaga gccacggaac accaccagat gagaagattg ccatcaccaa 120
 agctattata aatgtatcga atggatccaa gccccactc tttgctggca tcatagcact 180
 tgtgatgagc atcgcaacga tggtcggtct gaccgcgacg atgatgcctg ggagggttct 240
 cggtgctgcc ataggtggag ctaccctctc agaaggtaaa tcaaaagtac aagagcgcca 300
 gcggtccaag ctatcagaag aggtctgtga ggaagctgaa gacgccgtct ctgcaaagcg 360
 cctctcggag cttgaggaga aggtcattgc actcctgaca aaacccgcat caatgcctgc 420
 tgat 424

<210> 1159
 <211> 439
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-056-Q1-E1-G4

<400> 1159

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ctctcctcac ccgctcggag agtcggagcc cggcggccgg agggcgacgt cgtccctaata 120
aaataactaat aatttatcac tatacataac caatatataa gccatgggca agcgacgcgt 180
cnctcggtac cctgaggacn angacaaaagg cggctgctgc ggctgcctgt gctggtgctg 240
ctgcttctctg ttgttcatcg tggcggcgct ggccggcacg gccgcctact tcttcttctg 300
gtacaagccc aaggcgccgt cctactccgt gagcaacatg tccgtctcgc agttcgactt 360
cagcacctcc gacctgacgc tgtacgtcaa gctcaccgcc tccgtgcgcg ccgagaaccc 420
caacgagatg atcaccatc 439

<210> 1160
<211> 441
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-G6

<400> 1160

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ggggccagtc ggaggttcag ccgttctctgt tottgataaa acgagagaag gatggcagtg 120
tttcagggag ctgtcctatt cttgtttctc ctctcgtcgc cagcagaggt gggaaccatc 180
gatgccaaaa tgggagtagc catgcccatg catgccttga taatggagaa agcgaaacag 240
caggagacgg agaagaagga ggagaaaagc acggagaagg aagagagtca atgcttatcg 300
ccgagtctcc agttcgaggg cttctgcttc aacagcgaca gatgcgccga ggtgtgcatg 360
aaggagagct ttcccgttgg cgagtgcagg cgggacgtgg ccatgcgcaa gtgcttctgc 420
aagaagcctt gctagttcat c 441

<210> 1161
<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E10

<400> 1161

cgacacaggc ctccaagcga gccaaagccag cgcgaccagc gaggagtgcg ctgttgcttg 60
gggagtcctgt aatcatgctt ttcacgtcca ctgcgtcagc aggtggctta agactcgtca 120

agtgtgccca ggggagaaca gtgggtggga gttccagaga tagggccacg agttcctggg 180
cacgctcatg tgatgttggg gcttacttct agtgagtgt accactcgag ttagtttttt 240
tctgcgaggc agctccatcg tttaacgcct tggtgcgtg caggtagcag a 291

<210> 1162
<211> 127
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-E9

<400> 1162

acgcgaccag cgaggactgc agtgttgctt ggggagtctg taatcatgct tttcacttcc 60
actgcatcag caggtggctt aagactcgtc aagtgtgcc aggatataat agtgagtggg 120
agttcgt 127

<210> 1163
<211> 261
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-F4

<400> 1163

gacgacaacg tgtcctaaga ggacaagctt tgtttgcatt gggaaacaca attagctggg 60
agacgagcat tctcagtcac agaaaatttc ccgtggcccg attgagcatc cgtcacgtgg 120
gagctcttca cgatgaactt atccccactt caattcatac ccctggatca ccctagtctt 180
gtgatgtcgc gatgggtgaa gaggccatag acgccatctg caagagcgac gggacagcac 240
cagagtgaga agattgccat c 261

<210> 1164
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-C4

<400> 1164

gggaatatat agttcgtgaa tccctgaagc gtgcatatat atattcctgc cacgatgaag 60

gtaatggagt cgtcacgcag gttccagccg ggcgtcatcc tgcgtctect gtcattgtg 120
 tccaccgata tggcacaggc aagggaattc caaaagtaca gtgagcgatt tgttggggca 180
 tgcattgatc cagacaactg cgccaatgtg tgccgcggtg agggcttctt ggccggcagg 240
 tgcagcacct tccgccgccg ctgcatctgc actaggcagt gctaaacaag atcgctcgat 300
 cgcttgccat gcatcgacaa cctattctta ataacgttca ttatctcggt cttatttatg 360
 acgaatgtca tgtatgttct ggtgactgtc atgtatattc tgatgactgt catgtat 417

<210> 1165

<211> 161

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-056-Q1-E1-A4

<400> 1165

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 ccatcagcag cacaccatcg gcgtcggcga cgactgcac tccatcggn cccgggagcaa 120
 gatgatccgc atccatggcg tcaagtgcgg gccaaaggcca c 161

<210> 1166

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A5

<400> 1166

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 cgacgccagg ttctcgagg tcaagtctg gctcacctcc acgctcggcg gcaccgccac 120
 ctgcgaggac gctgcaagg acgccccgt cagcgacatc aagaacgtct gcataaccaa 180
 gagcttcgag ttgagaagc tgctgcgct cagctggac ctcatcacg aggttccgg 240
 ctccatgtcg gccgaggtcg cactgccgcc gtcggatgcg tcggcgccgt ccggagggta 300
 cggctcgtcg gctggcgccc ccgcctacgg cggccgtct cctgatgcc cagcttatgg 360
 cgccagcgta ccagcgccag cgccgagctc ggggcagagc actgcttcca ctgcatga 418

<210> 1167
 <211> 128
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A7

<400> 1167

ccggggccac ccacgcgtcc ggatacgccg gcgacatctg gagcttcggc ctcagcatcc 60
 tcgagttcta catgggccga ttcccgctgg gcgagaacct ggggaggcag ggcgactggg 120
 ccgcgctc 128

<210> 1168
 <211> 429
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-B12

<400> 1168

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 aggaccgtta tgaggccacc acaagttctt agggagggaa caaagaagac agtttttgtt 120
 aactttatgg atttgtgtaa aacgatgcat aggcaacctg agcatgtgat gatgttttta 180
 cttgctgaaa tgggaacaag cgggtcactt gatgggcagc aaaggttggt gatcaaagga 240
 agatttgccc ccaaaaactt tgaagcaatc ctgaggagat acatcaatga gtacgtcatc 300
 tgcaatggat gcaagagccc tgataccatt ctgtccaagg aaaatcgtct gttcttcctt 360
 cgctgcgaac agtgtggatc ttcaaggtec gttgctccaa tcaaagctgg attcgttgct 420
 caagtcggt 429

<210> 1169
 <211> 251
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-B4

<400> 1169

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 ctgggcaagc tcaaggcgaa gatctacggc aagggcattg agcagctgac cgccgcaatg 120

ggcgctccg agagctgcga ggacgcgtgg aacggcgatg aggaggatgt ccccgctgcc 180
 gcgcacgaca gggagtacgg tcggatggcg cagatcgccg tcggattcag acagcacgcc 240
 gccgtcgccg c 251

<210> 1170
 <211> 441
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-056-Q1-E1-B8
 <400> 1170

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 aagataagat ttcaactttt tttcccctgg atcgatctca gattaggagg agcaaataaa 120
 gcaagaatag aaagattttt gggggagaag gcatgatgct ggaaggggaag tcctaccttg 180
 tgtcacgctc cgtgccgagc tcctgcgagc cggaggcgga gtgggagtac ctgccccacg 240
 cggtcctcag cggcaagcgc ccggcgccgg aagatgacgt cgaggtcgaa gacccggacg 300
 aaactggcag cggcggcaag cgcagcaagc cggcgtctcc gcagccgcac acgccggaca 360
 tctgcgaggg ccacgggtcc aaccgccacg ccactggttc cggagagcag cggatcacccg 420
 ggagcaaccc catgacttcg a 441

<210> 1171
 <211> 438
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-056-Q1-E1-A3
 <400> 1171

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 tctggccttg gttccctcct cctagagcgc ctgtctgttg actacggcaa gaagtccaag 180
 cttgggttca ctgtgtaccc ttcccccaa gtttctactt cggtagtga gccatacaac 240
 agtgtactgt cgagcgattc cctcctcgag cacactgatg tggctatact gctggacaat 300

gagggcatct acgacatttg ccgccgatcc cttgacattg agcgcgcaac ctacaccaac 360
ctcaacaggc ttgtgtcgca gggtatctca tcgcttactg cctccctgag gttcgatggt 420
gctctgaacg tggatggt 438

<210> 1172

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-H4

<400> 1172

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cgcgtyggtcc accccatcgt caccctcgag gccgatggct catctcccac ctctggcgat 120
ggtcgtcgcc tgatcagctc caccaaccaa gatgaacttg gagcgttatg ccaacagatg 180
cactacaaga cgttgtgctc cacgatgacg aactgcctg gggtgactac gccagagcaa 240
ctcttagatg catccctgcg gattacagcg gtgaaggcag cgatggcgga gatgaagcta 300
gacaatgcaa taaaatcagg cagtgtctaa ggtaaccgga tgatgtcgtc gctaaagaca 360
tgcaaggaga gctacgcgtc gctggtagac tccatcaatt acacgcggaa cacgctca 418

<210> 1173

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A1

<400> 1173

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gcagccctcc tctttcttga agcgaagccc cttgaaatga atgaagcatg catgcatgca 120
tgtatgcatg cgccggggtg acgtggcggt cagctcagga gctgagcaag tctatacgta 180
cgtcgtcacc ggctggccac gcatgcgata accatctgat atggacggga ctatatattg 240
tagtcctaag aatctgggca ttttctaagc taagtgtttt tttccaaata tagcgtcgat 300
ggaactccag agtgtaaagg tcacgcagat ggtgtgtttt tcagcgattg aatgggtaat 360
aataaaaagg catgctggca gttactagta ggagagagga gaggggggag ggggagggag 420

ggagggaggg ggggggggga ggggg

445

<210> 1174

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-056-Q1-E1-A12

<400> 1174

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gtctcccacc agcggctcct ccgcggtcgc acccgccatc gtcggggccg ccgtggcctc 120

cttcttcgcg tactacattc actgagccgc cggacgagga gccggagccg gagggaagag 180

accaaggtgg ggggagagac ttggctgcgc tgcgctgctc tgctgctccc gcgcattccc 240

gatgcgtggg cgtgctctga ttgggcacgg cgggtggcagt ggcacacctt cgtcttcctt 300

ttgtttgttt tttttccttc ctctttctac ttgattttca tttaacgaat tggatcgct 360

gatgcaccag ttttaatttg tgccctgtta tttgttcttt ccctcgagtg agggatcgac 420

acct 424

<210> 1175

<211> 63

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-E8

<400> 1175

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cgg 63

<210> 1176

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-C4

<400> 1176

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cacgatcgac gccagaacgc agcaagcttt cgacggcgtg ggggccggcg ctacggcaca 120
aaagcgggtcc cacgccgtgg ccgccgtgct gcaacagcag ctgaacatag acgtgggtccc 180
tgtccaaagc cacgtcttcc ggagaccaga tcacatacct taccgtggcc cccgcatacg 240
agaaagccgc gggcacgcgc agcgcggcca cgcccgacaa gaagatccgc gccaatgagc 300
ttcccgtt 308

<210> 1177
<211> 402
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-C7

<400> 1177

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gtagctgttt cgcctatgat cgttgccgcc gtagtgctgg acaacaatgg cgctgacgcg 120
gtctcctgca ctgccatccc tagcgtaaca ataagcctag aggagaaaga aaatatcaat 180
ggggatgttc ccacgatcac ctcgccgcca agcaacgagg atgaggcggt gttcagtgtc 240
ggagaatcca ccaaggacga tggccatcgc ttgacgatgg aatgctccac tcccgtctcc 300
tccagtagcc cttccactcg caagaagcgc ggggcgttca gcctcttcag ggcgatgttc 360
ctgtccttcg gccggagcga cgacagcatg aagaagacag ac 402

<210> 1178
<211> 376
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-A5

<400> 1178

tcttgggtct cccaatagtc cgtaatcctg cagtcattct ctccaccacc accaccaagc 60
tcaacaacag ccagctcgcg aaaataatga agagccgcag catggcatca tcggccgcgc 120
tcttgggtgt agccctcgcg ctagtggcgg ccaccgcccc acaggtagcg gaggcaaaga 180
agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag gacgacttct 240
gctcgacgct gtgcgagggc aagaagggga cggacctggt cgtgtgcaag gagtctgcg 300

cgctctccca gcagtcacaac ctggtgctgt acggcaggat ccagtgaag ggcaagtga 360
ccgagcagaa gggcat 376

<210> 1179
<211> 386
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-A9

<400> 1179

agtgactcgt attaacgcgt gggcgcagga ccgccggcga cgatcgagga gggaggaacc 60
agatacccgg cggcggcgat cgatggctcc gcgcagctca tcggcggcga cgtgcctgtg 120
cctcgtcttc gccgcggcca cgctggcgct ggcccacggg gcgcaaggag gaggaccatc 180
ggcatcggcg gcggacctgg acaaggtcac ggccgagacc ttcttgga tgcagatcga 240
cggcaagcct gcaggccgga tcgtgctggg actgtttggg gacaccgttc ctaaacacgc 300
agagaacttc cgagcacttt gcacagggga taaatgaatt gccagtcgc gcaagcctct 360
gtggtacaac gggtcgacgt tccaca 386

<210> 1180
<211> 287
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-B10

<400> 1180

atcaagcgtc gatgcagatg gcggcaggac gcgctgatca agagcaagtt cggcgtcacg 60
cgcgggctgt ccatcgagtt catcgccgct atgtacgggc tgttcggcgt catgggctac 120
gtcgcgttcg gcgacgccac tcgggagatc atcaccacca gcctcagagc cgggtcgggtg 180
tcggccgccc tgcagctggg gctctgcac atcctcttct tcaccatgcc ggtgatgatg 240
aaccctgtgt aggaggtcgc cgagcgctg ctccagagga agcggta 287

<210> 1181
<211> 367
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-B7

<400> 1181

gggtcgacca acgtccaaca cacttctggt caactggagc ataaccttta tgtgcctacc 60
tcaaataccaa tttaaggcat tgtcaacctt tttaacaaat aaattgacct tatccccggc 120
aagtacccat attggaatag gacaaaagga gctgatcatt tctttgttgc ttgccattac 180
tggggggcctt acacaacaaa attgcatgat gaattgcgga agaactat taaagctctc 240
tgcaatgcag atctctctga aggatttttt atccgtggaa aagatgtttc ccttccagaa 300
acattcctta ggtcaccaat acgacctcta acagatattg gaggaatagc acctgcgcag 360
aagacta 367

<210> 1182

<211> 61

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-H10

<400> 1182

ggccgaccca atcctccaca actcgttgct ggagtagtga tcccggccga tcaccattcc 60
a 61

<210> 1183

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-053-Q1-E1-A11

<400> 1183

actcgcgggc cgatacaagc ctctacacag acgtcgtagc agcgcaagct catggccgac 60
gccgcgggctg aggccacgta caagcatgac ccggtcgagg tcgccaacca acttaaccgt 120
gcagtccaca gatccgtcga gaaggaggac attggcacga ggcgggagat gatggggacg 180
acgacgagga agtctaagtt cagcggggccg tgcagggcga cgaacccgat cgaccggtgc 240
tggcgggtgcc ggcaggactg ggcgacggac cggaagcgcc tggcgcggtg cgccaagggg 300
ttcggggcgca acaccaccgg cgggctggcc ggcaagttct acgtggtgac ggacggcacc 360

gacgacgacg tgggtgaaccc gcgccccggc acgctccggt ggggcgtcat ccagatcgag 420
ccgctgtgga tcaccttcgc caagaaca 448

<210> 1184
<211> 175
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-G1

<400> 1184

gcccaggccc ggtccaggtc caagcgacgg cgcgccaag gtcacggaga ttcagggtcac 60
cgtcgccttc agccacttcg gcaacgggct ggtgcagcgg gtgccgcgct ggcgtcacgg 120
gttcttccag gtggtgagta acgactacac acacgggctc aggtacgcga tcggg 175

<210> 1185
<211> 349
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-D4

<400> 1185

gcgtccagcc aaaccggagc acagagcttg tgtgtctggc tgtctccggc cggccgggct 60
tgtcgtacgt cctccaatct gttgacggtc aggccctcta gcttttctc ggcgttctgg 120
agacagagcg agagcgagag agagagagag agagagaggt acacggagat ggagtgcctg 180
ctggggctgc tcaaggtgcg ggtggtgcga ggagtgcacc tggccatctg cgaccgcctc 240
accacagca gcgacccta cgtcgtcctc cgccacggaa agcagaaagt gggatcaagt 300
atcaaatagc gcacgatcaa ccagaaatgg aacgaggagc tcaccctgt 349

<210> 1186
<211> 426
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-052-Q1-E1-B9

<400> 1186

ggtcgacgac gcgtccggtt cctgtccttc ggccggagcg acgacagcat gaagaagaca 60

gacgacgaca ccacgagccc caagaagaga gccatcgcg ctgctgatga cgattgcaag 120
cctgccggtg acgagtcaac gtcgtggaag cgctcgtgg acggtatgcg cccgctccgc 180
ctccgcgggc agctggagta ctaccgccg ccaccgccg caccgccgt gggccacgcc 240
gatgtgtacc atgacgtgat cctccgccg ccgtcgcagg cacggttcgg cttcgagatc 300
aaggagggtg gcatgaccag ccgtacgcg tccgtgagg atctgcacca gatggacagc 360
gaccaggaag aggggtgctga nggtggcgat gacggtgaca gcagtttgcc acacgcatcg 420
acatgc 426

<210> 1187
<211> 404
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-026-Q1-E1-E2
<400> 1187

ggtcgagaca cgcgtccagt ttaaatacgcg agcggccccc tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttaat caaacatata 120
ttgttggagt tagatattat ttatagagaa gctacgccac agcgacaata gaactggtag 180
tatggttggc cattggtggt tgtatatact atcgtcgcgc cgccgcctcc tcctccgtca 240
tcgtccgacc ccaccgtcca acggcatggc ggccggccgc gacgacgtca atgcatggtg 300
tgcatcgag ccaggccagc tgcgtgcccc ctggccagcc agccagcagg gagattaaac 360
cgccggggcg cgcttgggg ctcaattcaa gctgcgggg caac 404

<210> 1188
<211> 207
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-026-Q1-E1-E3
<400> 1188

gggtcagcag ctcaatcatc ctacacaca cagctcacac aactccaat atgaaacgac 60
atgatcacgg cctctggacc tcggctatcg caccgaagac gagaagaaa acggaacgc 120
agcgcgagca aaaatcagac actctgctca cctgtgcagg gcagaaggga ccgacctggt 180

cggtgtgcaag gagtcctgcg cgctctc

207

<210> 1189
<211> 324
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-026-Q1-E1-E4

<400> 1189

gggtcgagac acgcgtccac gccacatcg aggacccgca gacgagggcg atggtggaga 60
acttcgcccc gaacgagcca ctgtggcagc agaagttttc ccaggcgatg cagaaggtcc 120
ggatgcttga cgtgctaatc ggcgagggca aaggccaggt aaggaagcag tgccgcctgg 180
tgaacgggca ggagaaggag cagaagcagc agcagccacc ggaagagcaa ggagagcaac 240
agccaccgga gctggaggaa gangagcagc aacagccgca tcagccacag cttccatggt 300
tcctgcagag gcagcgcccc cccg 324

<210> 1190
<211> 286
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-E7

<400> 1190

cacgactcta gcatgactct tatcatcaag gcgtggaaga acgcgtgcga ggcgacgggg 60
gtacagaaga tcgtcatccc gccgggcaac tacctgacgg gcgggctgga gctgaagggc 120
ccttgcaagt cctccatcat catccgtctc gacggcaacc tgctcggcac cggcgacctc 180
agcgcgtacc aaaggaactg gatcgagatc gagaacgtcg agaacctgtc catcaacggc 240
cacggcacca tcgacgggca gggaaccctg gtgtggagca agaacc 286

<210> 1191
<211> 336
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F1

<400> 1191

cgggtcgata cacgcgtcta cacagaggcc tctataagct cgcacgcgcc ggcaaaatca 60

aagggttcac cggcatcgac gaccccttac aaccgcogtc ggactgtgag atagtgatcc 120

agtgtaaagt cggcgactgc ccttcgcctg aatcgatggc tggtcacggt gtgtcgtacc 180

ttgagacgaa tggtttcctc caggactaga catggaatgc gatcgatgcg tctgatgtgt 240

atatatgtag cagcagccgg agcggcattg ccaaggctgt gtaatctcat ggctgtcttt 300

ctctttaaga ccaaaacaaa caagagatgg cagtgt 336

<210> 1192

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F11

<400> 1192

acgcgtctaa cacgggtctaa tgaagcgcaa cgatttctga ccatcccctg acggtttgcg 60

gtggccgtcc aaatccaatc ccaggcgacc atgatctgag tggacaactc cgagtggatg 120

aggaatgggg actatcccc atcgcggttc gggcgcaag cccacgcctt cgcgctcctc 180

tccggcgcca agacggaggc gaacctggag agcacgggtg ggctggtggc catggcgggc 240

aaaggcgtca gcgtgctcgt cccgccaac aacgacttct gcaaagtcct gtcatgcatg 300

aacgggctgg aaattggtgg tgaagcaaac ttgactgctg cgattcacgt cgctcaattt 360

gcactcaaga atcggcaaga c 381

<210> 1193

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F2

<400> 1193

gggtcgagca cgcgtccggt tatacaggcg ctcattattg gccagagcct acaacggaca 60

ggtttgttgt catcacttct ggaccagacg aaagatgcat tcctggaaac accatcgccg 120

tccaagctga catgccatac agtggcctgt catcggtcgg aacagcattt ttgtccaagt 180

tcgaatgttc tcagatgcc catccactgt tagagcacgt gaccttcgtg gacactccag 240
gagttttatc aggggagaag cagcggacgc agcgcagcta cgatttcacc ggagtcacgt 300
cgtgggttgc ggccaagtgc gacctcatcc ttctcctggt tgatccgcat aagcttgaca 360
tcagcgatga g 371

<210> 1194
<211> 315
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F3

<400> 1194

gggtcgagac acgcgtccag cactacgtgc tgcacaacgc caccgagctc agcagcaacg 60
cgctggccat caccaacagc ctccggcgga tcctgaagaa gatggacctc ggcatgttca 120
gcaaggactc gcgcgcgcga ctgctgtcgt cggagcaaga tgagaaaggc tggcccgtgt 180
ggatgcggtc gccggagagg aagctgctgg cgtcgggcaa ccagcccaag ccgaacgcga 240
tcgtggccaa ggacggtagc gggcagttca agagcatcca gcaggccgtg gacgccgtgc 300
ccaagggcca tcagg 315

<210> 1195
<211> 299
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-026-Q1-E1-F4

<400> 1195

ggtcgagncc gcgtccaccc acacgtccgg gcggtggcag tggcacacct tcgtcttcct 60
tttgtttgtt ttttttcctt cctctttcta cttgattttc atttaacgaa ttggtatcgc 120
tgatgcacca gtttaatttg gtgccctgtt atttgttctt tccctcgagt gagggatcga 180
cacctgtacc attgcttgcc atttgtctgg accagttcaa caattcgatt taaccatcaa 240
aaaaaaagaa agtaacaggc agttcaagaa catcaagcaa ggcgtggaaa cagataacc 299

<210> 1196
<211> 314

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-F7

<400> 1196

ctctataatg agtcgtaata ttgagattag aaaggagtgg ccaggaactc aatgatgtgt 60
 ggaccagcat ggctgactcg tcggagtatg ttagagctca tagctaagcc aagcacaaga 120
 tgtggactca tcttcaagaa tgattttcat tcgctacttc atcgttaatc gcattttaat 180
 ttgttttgaa ttgtcattgt acgtcgttta tgacataaaa ctgtttattc atcacatata 240
 taattcatgt atcgagatat aaaaaagaaa aaaaaaaaaag agagaaagaa aaaaaaagg 300
 gcggccctct aaag 314

<210> 1197
 <211> 298
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-G1

<400> 1197

acaatactct aatgtgagtc atattataga cctgcgttgt caccaccca tcgagggttg 60
 ggccgccagc aggttcagcc gttcctgttc ttgataaaac gagagaagga tggcagtgtt 120
 tcaggagagct gtcctattct tgtttctcct cctcgtcgca gcagatgtgg gaaccatcga 180
 tgccaaaatg ggagtagcca tgcccatgca tgccttgata atggagaaag cgaaacagca 240
 ggagacggag aagaaggagg agaaaagcac ggagaaggaa gagagtcaat gcttatcg 298

<210> 1198
 <211> 85
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-026-Q1-E1-C3

<400> 1198

cgcgtctaaa gtaagtccta ttacnacta tccaccaccg cgccgctccg gtttaatttc 60
 tcctcgaccg gccagcgcaa ttctg 85

<210> 1199
 <211> 269
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-D1

 <400> 1199

 tgggtgctcct cctcgggtgcg tgccccgagt acggctgcct cgtgtacgag tacatggagc 60
 acggcagcct cgaggaccgg ctgttccgtc ggggcggcac gccgccgatc ccgtgggacg 120
 agcggttccg gatcgccggc gagatcgca cggcgtgct gttcctgcac cagacaaagc 180
 cggagccgct ggtgcaccgg gacctgaagc cggccaacat cctgctggac cgcaactacg 240
 tgagcaagat cagcgacgtc gggctggcg 269

<210> 1200
 <211> 335
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-D2

 <400> 1200

 acgcgtccaa acacacgtcc gccacgcgt cggcatctt ccctgtcgtg gatccacatg 60
 aacaagggtg gccctacccc tgctcttttt aaggctgaaa tgccctggtc agcccgaaga 120
 ggaaatctct cggagaaaca aagagtcttc aaaacgggtga aaggaggttc ctttatagct 180
 tacttgatgc aatgcagtct ctaacatcgc aagctgttgt tattggtgtg agttgccgct 240
 tgggtgtcact cttgattgat gtttcaaaca aaaaagatgt cattcctggt tatgtagtaa 300
 tgatcatgca acaccatata aagcacatgt gtttc 335

<210> 1201
 <211> 226
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-D9

 <400> 1201

 gaccaagcg taagggaagt tccatgtgga acatgtcccc gggttcctat gtgtgggaaa 60

acaggggtgt acttttttta aatgggcaac cccatttgta gggaaatcca aggggggtata 120
 tcctttccac gaaaaggatt ggatagatgt atggctatct ttatgttgtg ttctccgacc 180
 acgggaaaga atggtaattg aaaaacactg tgggtgtata ctgagc 226

<210> 1202
 <211> 331
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-E1

<400> 1202

gggtcgagac acgcgtctag gccgatgcgg ggcactgcct cgctgacatc ggtgacatga 60
 tgacccgcga gttcacggct cagcaggatg tgctgagcac actcgaggcg ctatgcaagc 120
 aagcgcgcga ctccgtcctc ctctccccac goctgccctc cttccgacac ccctcgaccg 180
 acggcgacgg cgtcgacgag ggtacagccg tctccggcgg gcggaagcac gtgtcgttcg 240
 gcgacctgag cttcgcgag tgggcgtcgt tcctggagag gttcgagcag ctgctgccgg 300
 cggcgctaga agccaagaag cgcgctgggc t 331

<210> 1203
 <211> 78
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A3

<400> 1203

aaatctcaag aactaccga aactttggcg acagataact ctgcattaac tgataagtgc 60
 aaccaacagg cacatgta 78

<210> 1204
 <211> 253
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A5

<400> 1204

gaggaaatcg tcgcaatgct gggcggcggc cacagcatcg gcgtctgcag gtgcttcttc 60

atcgagaccg acgcggcgcc catcgacccc aagtacaaga agacgatcag cgacgcgtgc 120
gacggcaagg actcgggctc cgtcccatg gactccacct cgcccaacga cctggacggg 180
agctacttcg gcctgggtgt ggagaagaag atgccgctca ccatcgaccg cctgatgggg 240
atgggcaaga aga 253

<210> 1205
<211> 382
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-026-Q1-E1-B10
<400> 1205

atacacgact ctagaatgac tcgtgggagc cccgtccact ctctgttcgg tcccgcgatg 60
ggcatgttcg catcgccgc aaagagatac agcaacggca agaattttct ccgcagcgcg 120
ggcgtgtgct gttgttcgcc gtccgcctcc gccagcttg gtggtgtgcg cggcaaggaa 180
gagacatcga cgtcggcgcc agctttcgcg ccgatagca acaagaaaag gtggaggaag 240
aagaggttct ggagaaagaa gatgaaggcc aggaaggaga tcggcgggct ggtggacctc 300
gtcaacgata ttctggccaa gtcagaggag agcctaaggg ttagcaacca aaacatgccc 360
agcagggcgc tgacgttcag tc 382

<210> 1206
<211> 362
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-026-Q1-E1-B12
<400> 1206

gccgatacaa cactctagaa tgcgtcgtct tagtcgcca cagcgcccga cgtcgagctg 60
ccgcacgcca acttcaccgt ggaccgcctc atccagatgt tcggcgccaa ggggttcacg 120
gtgcaggagc tgggtggcgt gtccggcgcc cacacgctgg gcttctccca ctgcaaggag 180
ttcgccgacc gcctctaaa cttccgcagc cagggcgggg agccggagcc gttcgacccc 240
agcatgaacc cgtcctacgc cagggggctg caggacgtgt gcaaggacta cctcaaggac 300
cccaccatcg ccgcgttcaa cgacatcatg actccgggca agttcgacaa catgtacttc 360

gt

362

<210> 1207
<211> 309
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B2

<400> 1207

gggtcgatac aagcctctac actgcgtcct ccgagcaaca actcagccgc cgcaaccgcc 60
acatcagcca tgggcgcctg cgcaaccaag cccaagacgc ttgaggggca ggccccagct 120
gaggccgccc tctccacacc caaggttgcg cccgaggcca ctccaatctc cgttgagggtt 180
gcggctgatg aacaggtagc tgagaagggtg gtgggtggagg agccggctgc ggcgcccgac 240
gttgagcatc agaaggctaa tgaggtgctc gctccagagg cggccgctgc cgagcccgac 300
cacaaggag 309

<210> 1208
<211> 298
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B3

<400> 1208

ggcacgcgtc tacgtacat catgtcaagc aacatactgc tctttgacca tgatgttgcg 60
aagatcgggg acttcgacat ctcaaaccag gccctgaca tggctgcgcg cctccactct 120
actcgcgttc ttggcacctt tggctaccat gcaccagaat atgccatgac tggacagctt 180
agcacgaaga gtgatgtcta cagctttgga gttgtgctgc tggagctttt aaccggtcgc 240
aagccagttg accacacact gccccgtggc cagcaaagcc ttgtgacatg ggctacac 298

<210> 1209
<211> 290
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C1

<400> 1209

cggtcgagca cgcgtctagc actatgcaat gaactttaca cagtagtccg tgaagttttg 60
gatgccattc ctcccttttga gactacacgg tcaggatgca gtcctgggct cctggcattg 120
agttccttga ggatatctgt tgagaaagcc aagaatttac tccagtattg ctgagagagt 180
agcaagcttt acttggtgtg tacagcagaa agcgttctaa caaaatttga gaattcaaga 240
caaggacttc tggaaagcct tcaccaagta gaagaaacaa ttccggaagc 290

<210> 1210
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C11

<400> 1210

ctcgcggtc gatacacgcc tctacaatgc gtctcctgat ggttactccg cgcgccttct 60
ctttctctcc cggacgtcga tcgtgttctt cagcacgggc tagctagctc cctccctccc 120
agccatggcg acgccggaca acaaggggca cgggcatccg ctgcccaggt ttggggagtg 180
ggacgtgaag aatccggcca cgtccgaggg cttcacctgc atattccaga aggcccgcca 240
cgacaagaag accaccaccg gccctggggc tgggaacgcg cgcgcaggca ttccgccggc 300
cttcaggaac ggcggcgggc acggcgggta caggcccgcac ttggcgacg gcaaccagta 360
cacgccccc aaacggaaga agtgggcctt ctgtggctgc tgaatcgaag ctgctg 417

<210> 1211
<211> 378
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C12

<400> 1211

tacaagactc tacaataatt cgtgcgagca gccacaggca ggcgtcggca ccatgtcttc 60
tttcaccggc acgcaggaca agtgcgcgga gtgcgacaag accgtccact tcacgcacct 120
cctcacggcc gacggcgctca cctaccataa gacatgcttc aagtgcagcc actgcaaagg 180
gatcctctcg atgtgcagct actcttccat ggacggtgtg ctgtactgca agaccactt 240
cgagcagctc ttcaaggaga cggggagctt ctccaagaac ttcacgccag gtggcaagtc 300

ttcagacaag ggtgaactga caagggcccc cagcaagcta tcatctgcgt tttctggtac 360
tcaggataag tgtgcagc 378

<210> 1212
<211> 266
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G6

<400> 1212

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tgcgaggact ggcgcatttt ggcaagtggc ataaagacaa ggataaggaa gatgataaaa 120
atggggctga ggacggtgaa catgggtccg ttccgatttc agtcttcatg gttgcaagtg 180
tcctcaagga gaagagagaa aaccagttag aagaatcgag acgactgcat catcgatatca 240
ggatattgaa cgatgtaaat gggaac 266

<210> 1213
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G8

<400> 1213

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actctcttat gtactctgat gaatgtctga ctaatgatag atgggtgcaat gctgcatagg 120
gcacaaatcc aagaacacct cgtatacaac aacctaataa cgaatcagcc aaaaaaaaaa 180
ttaaccagaa gaccttatta gtcaatcttg aggtcgttgc acgatcaaag attgggcgac 240
tctctttgat tcttaactct ttcttgtag tcaatcttta gggtgcacca tccaatgaat 300
gctgacgatg tttatgtacg tggcgctcgtg gcggttaatg gatgcccttg ggcggttggg 360
ccgtcttcgc atgcatgggg gcgaagagat aact 394

<210> 1214
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H1

<400> 1214

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cctcgcggtt gtatttggtt cctacgcctt cgtctgctgc ttgtcgctcg tcttcgtgta 120
cctcaggggtg cccgagacca aggggttccc gctcgaggtc ataatcgagt tcttcaacgt 180
gggtgccaaa gtcagaagc cggagcagca tgaagaggag gagaaccacg actaaccgt 240
atatatttgg attcattaat aataactgtt ttttctttct ttctttcttt ctttctttct 300
ttctggatta tgagttgaat gaatgatgtc gatcagagag cttgatgacc atcatgttag 360
cgatcccatg aaatatgttt gaggacgcat ttggatgttt ctaaaaaaaaa aaaaaaaggg 420
ccggcggctc t 431

<210> 1215

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H12

<400> 1215

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cgtcttttga aactgattca tgtgagggtc gtgttgagca gaagaggaaa aatattccat 120
cagtctctac agcactacta cttgggtggg tgcttggcct acttgaaacc ctactgcttg 180
ttctctctgc aaaacctatc ttaggctaca tgggtgtaaa accggactct gcgatgatga 240
agcccgcatg gcagtactta gttctcagat ctcttgggtc tcctgctgtt ctgttatctc 300
tggcaatata aggagtcttt cgcggattta aggatacaaa gacgcctcta tacgcaactg 360
tggctggaga tgcgatcaat atagttttgg atccaataat tatgtttggg ttc 413

<210> 1216

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H3

<400> 1216

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ccaaggcaat ccgccgccga cgtaccacca ccaccgcagg agcgagatgg agatgaagag 120
gatectcttc gccgtcctcg tegtcatcgc cgcttcggcc accgcagtgc tggcctccac 180
cgaggccgcc gccgcgggcg ccccaactgc ctccgagtcg tccgccgagg ctcccgctgg 240
cgctggcgct ggcgctgccg ctggcgccgc cgccgcgggg ccttcgccca gcagcggcgc 300
gcccgccctc gccgccgcgc ccgcgcgct cctcttctcc ctctcgcct actacctcca 360
ctaagcctgt gcgtgc 376

<210> 1217
<211> 219
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H5

<400> 1217

ataaaaatgg agacaacaac aaaactcccg tggagccgc ccggctcctt cctcctcgtc 60
tccgcggcgt tcctggcgtc cgccgccgcg tctggcgta acatcggcca gttegacgac 120
cacttgacga agcggaagga gctcgccgag gcgtctgcca gggaggcgta caggcccgac 180
ccgtacaacg tcaccaacag cttcaacgcc gccgtccac 219

<210> 1218
<211> 375
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H8

<400> 1218

cacgcgtcta aaatcggctt gataatggga tgcaccaagt acatggacat ccacagcgaa 60
cctgcagctg tcatccgtgg cacgaatgga tccgggggca tcaactgtgaa gaatacaggg 120
caatcagtca tcattgggat cgacgacgag cccatgactc ccgggcagtg taacctggtg 180
gtgagaaggc tgcgcgacta cctgctcgaa caggggatgt gatgacaacc ctttctcctg 240
gaatgcatgt tgatgatgtt gctgggtcca acttcgtatt cagtaataac aacacagcta 300
agagcctcct acctacctta attgcttgag cggctcttgc ccgcgccata agataccaac 360

tgttgcactg ggaaa

375

<210> 1219

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A10

<400> 1219

tcgtgggtcg atacaagact ctaatctatg tcgtcataat ggcatgcaca aacaatgcga 60

tgagagcctt gttcctcctg gtcctcttct gcatcgtgca tggtgagaag gaagagtcaa 120

agggcacgca tgcgaaagcg tccgggcctg gtgggtcctt cgacatcacc aagttgggcg 180

cctccggcaa tggcaagaca gacagcacga aggctgtgca ggaggcatgg gcatcggcgt 240

gcggcggcac tgggaagcag acaatcctca tacccaaggg cgacttcctt gtcggacaac 300

tcaacttcac aggcccttgc aagggcgacg tgaccatcca ggtggatggc aatctgctgg 360

cgaccacgga cctaagccag 380

<210> 1220

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G4

<400> 1220

ctgcaaggac ccttgaaagg gcaaggagga ggatgttccc cgttccccgg gccacaacaa 60

gggaattacg gtccggattg gccccacaac cgccctttcg gaattcaaac aacaacgccc 120

gccggttccc cgccgcccgc cgcatgaatc gattaattat tatatatata tatatgcatg 180

ctatctacta tgatcgatcg cttctcgacc ttcttgcac gatctgcatg catattataa 240

tttatattat attgatgcca cgccgcatgc aggtctttcc aaggcgtacg tactatatca 300

aattatttta atttccttac atgtatatgt atgtgctgct gttggatacg tacgtatata 360

tatatgttcc aaggtttccc ggttccggcc ttgttacatg catgaag 407

<210> 1221

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F12

<400> 1221

gggtcgacgc ccgcgtccag gccgacgcgc tgcacgtgcc gcaccgcccg gaggaggtgc 60

gccgcctagt ccgcctcacc ttgcgcgcgc cgcccctcat catgccctcc tgcttcctat 120

gggactacat caaggtgatg ggctctgatc atatccagga gaaagctgag ctgctatacg 180

ctttgattaa cgggaggcaa ctctgtactc ttccaaaatt gacccagccg acgcttataa 240

tctggggaga gcaagatcgg gtgttcccaa tggagctggc tcacagattg aatcggcatc 300

tagaggggaa ttctcgatta gttgtcataa aaaatgctgg gcacgcggtc aatatcgaga 360

agcccagga agtgtgccgg agcatcattg agttcttc 398

<210> 1222

<211> 384

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-F2

<400> 1222

tttattctta tcagcgctgg tttcaaaca cgaatttta accttcattg accggggggg 60

taataacatg tccaacagt taatatacag aatccaacca ataaaaaat gtcaggaaaa 120

aaaagaaaag aaaagtaatt caagggcaac agacatctcc aggtacgagc tgtgcctcca 180

gccctccaca gnacatccga aatgcaggtc aagatctacg ctgcgcgcatc caaaccaa 240

cccttctggt cttctggagg ttctggtcgt gggctcccca ccgacaatga ggctgcgccg 300

gaatcacgga gcggagcgga gatcgccgcg ccggaatccg gacgaatcca tcagatggtc 360

cggccgattc gcgcgagctc cttt 384

<210> 1223

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F3

<400> 1223

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 ataatggccc gtgcatgcgt gttcctcgtc gtgctcctcc tggccgccat cgcggtggca 120
 ccgttcgcgg gcgcgcgacg cgtggacgtt gtggagggta ggtccatggc atccgccgat 180
 gcaccggagg cggcgggcca tgctcccgt cctagccccg actccgcctc atccccagac 240
 tcgtcatcgg aggcgcctc tagcagcagt tcctccgact agacgcaaaa acctcttcat 300
 tctctggaat aactaacagt atatacgtt caccctgatg atatagaaac atgtacgtgc 360
 atcagtgtat ggaatgcgag tggcaaacac atggaatgtg cttgccctaa tattgggta 419

<210> 1224
 <211> 331
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-025-Q1-E1-G10
 <400> 1224

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 ctgcgcgagg aacgggcctc agtgctcgcc gccagcagca aggtctctga tgaggcggcg 120
 gcggcggcta ccgcggtgcc gcctgcaggt gccaagacct ccagcagcaa cgatgcccg 180
 gacggcgcca tgggcaacgt gcaggacgag ccgcggcagc agcgccacga tgactatcac 240
 caccgagaga tcgtccccga gaagatcata cagcaggacg cgttgccggt cgttgctg 300
 gagaaggaga ctgccgcgcg cggcgaacc t 331

<210> 1225
 <211> 415
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-G11
 <400> 1225

gtcgacacac gcctctacat ctattcgtgg cagccctcac tctttagacn gtgaggagga 60
 gcacaattct gatcagcatc tggcagcaag tgctactgag angttaatan acctgttggc 120
 tcagcagcaa gaagagcttc gtgcgctgca aaggaaacac aaggcggaca tagaggagat 180

gctgaaaatc gtacctgctg aggatcgagg agagacctta actctatgcc gcttgaaggc 240
 ggaacagaaa aacagagccg ccgaacctta gataaactgt ctcatgtgca tgttcctctg 300
 tgtgctgtta gatttataca tactcacacc aaggagttgt tgtttacact ttacagccgt 360
 tgttgtgcaa aagttggaca tctgttgtgc agaagataag tctgaagcct ttttc 415

<210> 1226
 <211> 341
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-G12

<400> 1226

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 ttttctccg acatccacag gggggagggg aaaacacgtg cattcaccgc gcggcaataa 120
 tggcctcggc tccggtccg gcgacgacga ccgccgcgt aatcctatgc ctatgcgtcg 180
 tcctctcctg tgccggggct gacgaccca acctccccga ctacgtcatc cagggccgcg 240
 tgtactgcca cacctgccgc gccgggttcg tgaccaacgt caccgagtac atcgcgggcg 300
 ccaaggtgag gctggagtgc angcacttcg gcaccggcaa g 341

<210> 1227
 <211> 436
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-G2

<400> 1227

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 ttccaaaacc aaaactgaaa ggactgcca attttgcaaa ttggaataag gacaaggata 120
 aggaaaatga taaaaatggg gctgaggacn gtgaagatgg tccggttccg atttcagtct 180
 tcatggttgc aagtgtcctc aaggagaaga gagaaaagct gttacaagaa gccagaggac 240
 tggatgatct tatcaggata ttgaacgatg taaatgggaa cttagatgct aagaaagctt 300
 gcgctggagc attgaaactt cacaaaaaat acctgaaaaa ggtacaagca aagaaacctt 360

aaacgtgcc a tggaacacac gttcccaatg gggctaacct tacaatttca catacacgac 420
aattttccaca cacaac 436

<210> 1228
<211> 369
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F10

<400> 1228

ggtcgaggcc agcctctaca gtcactcggg tcacggagat gcacgcgcgc cggccccgtcc 60
tgcagggccg caccgaggtc gagcagatcc acaggatctt caagctctgt ggctcgccgc 120
gcgaagactt ctggcgccgc ttggggctct cccacggcgc cgtcttccgc ccgcagcaac 180
cttacccgaa ccgcctccgg gacaccttcg ccgcgtccat gcccgaccac acgttccgcc 240
tcgtcgccac gtcctcgcgc ctcgacgctg ccggccgtgg caccgccgcc gccgccctcg 300
acgccgagta cttcacgacg gcgccatacg cgtgcgatcc ggagagcctg cccaagtacg 360
cgcccaaca 369

<210> 1229
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-D7

<400> 1229

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atcttcccga gcgagttctt ggttgacctc ttcccccttc ggaccacctc caaggctctt 120
ggtgtagctt gccactctca ccaatcaagt tttcatgtct gatctcgaca ttcagatccc 180
aactgccttc gatcccttcg ctgaggccaa tgctggggac tctggtgcgg cagcagggtc 240
aaaggactac gttcacgtgc gcatccagca gcgtaatggt cgcaagagcc tgactaccgt 300
ccagggattg aagaaggagt tcagctacag caagatcttc aaagatctca agaaagagtt 360
ctgctgcaat ggtacagtgg tccaggaccc agaacttggc caggtcattc agctccaagg 420
tgatcagagg aag 433

<210> 1230
 <211> 422
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-E11

 <400> 1230

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 catgcatcag aggggctact ttcacgtga cctcaaacct gagaatctgt tagttagcaa 120
 agatgtcata aagctagcag actttggtct tgcaaggga gtttcatcat tgccgccata 180
 tacagaatat gtctcaactc gctggatcg ggcaccagaa gtattgctcc agtcatctgc 240
 ttatgattct gcagttgata tgtgggcaat gggtgccata atggctgagt tgttgacact 300
 ccatectctc tttcctgtaa ccagtgaagc tgatgagatt cacaagatat gcaatgtcat 360
 cggtagtcca gatgagcaat cttggcctca aggattgtca cttgcagaag caatgaagta 420
 tc 422

<210> 1231
 <211> 415
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-E12

 <400> 1231

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 gcaagagcaa gaccgacaac gtgaaggcga tgcccaacac actggtgctg tttcacgtga 120
 tcaacgccac tgtcgccgga atcaaactac tcaactccaa gttcttccac atcaacatcg 180
 acaactcaga gagcatcacc gtgaaggacg tgaacgtcac cgcgcccgcc gacgttgaga 240
 acacggacgg cgtccacgtc ggaggctcct ccaagatcag catcctcaac tcgaccatcg 300
 gcaccggcga cgactgcgtc tcgattgggc ccgggtgcaa cggcgtcttg gtggacagca 360
 tcacctgcgg ccccgggcaa ggcacacgcg tcngctgcct aagccgtac aagga 415

<210> 1232
 <211> 425

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-E2

 <400> 1232

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 accggcgga ggaccggaac acatctgcgg cattaccggg acggcgtgaa cgacgcgccc 120
 gcgctgaaaa aggcggacat cggcatcgcg gtggacgacg cgacggacgc ggcccggagc 180
 gcgtcggaca tcgtgctgac ggagcccggg ctgagcgtga tcgtgagcgc cgtgctcacc 240
 agccgcgcca tcttcacgcg catgaagaac tacaccatct acgccgtgtc catcaccatc 300
 cgcacgtgc tgggttcct gtcgtcgcg ctggtctgga agttcgactt cgcgccttc 360
 atggtgctca tcattgcat cctcaaccaa cggaacatca tgaccatctc caaggaccgc 420
 gtgaa 425

<210> 1233
 <211> 384
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-E4

 <400> 1233

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 tgctagcggg ggccgcggat gtcgccaacg ccggccacgc caagcccctg acgctggcg 120
 ggcgctgggt acaccacaac cacggcaagt tcacggccgg gccgtggaaa cccgccacg 180
 cgaccttcta cggcgggagg gacgggtccg gcaccacggc gggcgcgctg ggggtacaagg 240
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 acggcgcggc ctgcggcggg tgctacgagg tgcgtgcgt ggacagcccc agcgggtgca 360
 agcccagcgc gggggcgctg gtgg 384

<210> 1234
 <211> 429
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-E8

<400> 1234

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ggcgcggtga gctcgtgacc gcccgagcgg caccgcctc tgcggtttga agctcgtctg 180

aagcactcca attaaacaaa agaagccacc atggcggtta attctccgga ggagatatgg 240

ggggacatct aactgtgtaa aatatcggtg gaggaggtgt tcacgacact gaaatgcgac 300

cgcaaggggc tgtctagcac agagggcgag aaccggctca tgacgttcgg gcccaacaag 360

ctggaggaga agaaggagaa caacctcctc aagttcctgg gcttcatgtg gaacctcgtc 420

tcgtgggtc 429

<210> 1235

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-E9

<400> 1235

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cgccgctccg gtttaatttc tctcgaccg gccagcgcaa ttctgtgcct cgatcgatcg 120

gtcgtgaaggc aagtgaagca gctatatata tatatatata tatatatata taggagattc 180

ttcgagcgag ctagtagcga gatgggttcc gccgtcctct tttactgcat ctgcatcgcc 240

gccgtcgtcg cattgtcgtc gtccatggc gccgtcgggt ccgcccggcc gggggaaaac 300

cccaagttca tctcggcgag cgcccttgag tgctccgcta acgtaacgga aatagcaaag 360

gcgcgcaagc tgatcgatgt caatggccac gggctgtgcc cngtgcgggt cgaccacacg 420

cgcgga 427

<210> 1236

<211> 396

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-C1

<400> 1236

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gcaccgagca gaagggcatc acggcgccgg ccatgaaggt ctgccaggan gagtgcgaca 120
aggcgtacgt ggtgaaggcg gccgaggtca ccaaggcctg cagcgtcacc tgcgccaagg 180
agaagaaccc gcgcctcagc gagaactgca agaggtcctg caccctcct ctttcttgaa 240
gcgaagcccc ttgaaatgaa tgaacctatgc atgcatgcat gtatgcatgc gccggggtga 300
cgtggcgctt agctcaagcg ctgagcgagt ctatacgtac gtcgtcaccg gctggccacg 360
catgcgataa ccatctgata tggacggaac tatata 396

<210> 1237

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C10

<400> 1237

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tgagagagccc gcgggtgaag tacggcgacg gcgagatcca gtcggagtac cgctacgaca 120
ccaccgaagt cgccccgccg gggaatggcg gcggcgccgg gtgggtggtg cgcccaaagt 180
ccgtcaccta caacttcaag accagcacca acgtcccaaa gctgggggtg atgctcgtcg 240
gatggggcgg caacaacggg acgacgtca cgccgggggt gatcgccaac agggaaggga 300
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<210> 1238

<211> 268

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C11

<400> 1238

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gtggaaacag aacagaccca ccaacctatg caaactcggc gtcgggaatg gccttgaccg 120
acaattgcaa gctcaatttc aagaagctca ggtcaaagcg aagcttccgg ttcacacgt 180

tcaagatcaa cgagcagacg cagcaggtgg tggaggacac gctggggcag ccgggccaca 240
cctaagacga attcaccggc tccatgcc 268

<210> 1239
<211> 423
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-025-Q1-E1-C12
<400> 1239

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ggtcgccgtg ctagcgggtg ccgccgatgt cgccaacgcc ggccacgcca agcccctgac 120
gcctggcggg cgcgtggtac accacaacca cggcaagttc acggccgggc cgtggaaacc 180
cgccacgcg accttctacg gcgggcggga cgggtccggc accacggcgg gcgcgtgcgg 240
gtacaaggac acgcgcgcgc aggggtatgg cgtgcagacg gtggccgtga gcacggtgct 300
gttcggtgac ggcgcgccct gcggcggtg ctacgaggtg cgctgcgtgg acagccctag 360
cgggtgcaag ccacgcgcgg cgacactggt ggtgacggcg accgacctgt gcccgcccaa 420
cga 423

<210> 1240
<211> 447
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-025-Q1-E1-C2
<400> 1240

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cgacgtgccc ccgcccgtta acgggccact ccatgtcatc cccaacgtca tcaccgccga 180
gttccggacc ttcacgaga tcgtcttcga gaaccccgag aagagcatag actccctcca 240
cctcgacggc tacgccttct tcggcgctcg gatggggcct gggacgtggt cgccggagat 300
gaggaagacg tacaacctac tggacacggt gagccggcac acgatccagg tgtacccgcg 360
gtcatggacg gcgatcatgc tgacattcga caacgcgggc atgtggagcc gtcgggtcaa 420

cgtctgggag cggtactacc tcgggga

447

<210> 1241

<211> 328

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-C3

<400> 1241

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cacaaactgc cccgtgggca gcagagcctt gtgacatggg ctacaccgag gcttaatgaa 120

gacaaggatga ggcaatgcgt cgattccagg ctgggagacg aatacctcca aaggctgtag 180

ccaagatggc tgctgtggcc gccctctgcg tgcaatacga ggggtaattc cgtcncaaca 240

tgagcatcgt cgtcaaggct ctgaaccctt tgctgcacag ccggtctggc aaccgcccta 300

ctgcctcgtc ggctcccccac gctgccgc 328

<210> 1242

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C4

<400> 1242

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ggagggcgaa gtggagatga agtgcccgtt ctgccacagc ggcttcctcg aggagatgga 180

gaccgccccgc ggggccgcga ccgacgacgg tgacggcgac ggcgacggcg cgggtggctca 240

ggtgcacccc ggcgcgcgacc gcccgagctc catctgggcy cacgctatcc tcagcacggt 300

cgacagctcc gcccgtcgcc gccgcaaccg gcggcagcag gaggccgcca gcgacgtcta 360

cgactggaac gaccccgagt tctcgtgcy ccggcggcgc gtcaccgct tc 412

<210> 1243

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C5

<400> 1243

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ccgcggcccc cgctcgaggaa gaagaaggga taggagacgg agacggagac ggagccggtg 120

gtcgcaagga tggccggggg catgcaggcg gcggacgcgg cgggcccggct gagcgcgctg 180

ctctcgctgc tcgcgtgcg cgggtctctc gccgtgctcc agccgctggc cctgctctg 240

ctcctgccct tccggtggcg cgcgcggccg gccggggccg tggccgcggc cgtggcgctc 300

gatgccgcca cggcctccgc gccggggggc agcgggagga acgtgaatgc gtcacgctcg 360

tcgtcgggtg ttctgcgggt gccggccggg tcccccat 398

<210> 1244

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C8

<400> 1244

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gcgcggcgtc ggccccaac ggggcccggc cccggcgcg ggggtgggcg cgggcgcgga 120

tggggcggtg cagcgaggcg tccacctcgg gtctgccgcc gccgccgcg cgcgcgcagg 180

aggcggcgga gtcgtcgtcc gggggcagga ggcgagggcg caaggtggcg cggagccca 240

aggagccggc ggaggagggg accgcgcgc tcgcgcgat gcccggtcg cccagcttca 300

ggtactactg ccagaagaag acggcggccg tcgacaggat cgtggccgac gccgacgccg 360

ccgacgccga tgactccgtc agggtcagag ccacggtgcc tcacctgaac aacaggtgca 420

aatcacggc gaccaaggca cagattcta 450

<210> 1245

<211> 360

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-D1

<400> 1245

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atggcgctcct acccgacgaa gaagggcgcg aaccctccca ggccgtctcc aaccccgcca 180
acaccgccgg ctgcccctga caatgtctgc gacgagaact tctcgtgctc cgcgggcagc 240
acctgctgct gcgcgtttgg cttcaggaac gtctgcttgg tctggggctg ctgcnctgtc 300
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<210> 1246

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-D10

<400> 1246

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taatggagtc gtcacgcagg ttccagccgg ccgtcatcct gcttctcctg ctcattgtgt 120
ccaccgatat ggcacaggca agggaatgcy agaagtacag tgagcgattt gttggggcat 180
gcatgatcgc agacaactgc gccaatgtgt gccgcggtga gggcttcttg gccggcaggt 240
gcagcacctt ccgccgcgcg tgcacttgca ctaggcagtg ctaaacaaga tcgctcgatc 300
gcttgccatg catcgacaac ctattcttaa taacgttcat tatctcgttc ttatttatga 360
cgaatgtcat gtatgttctg gtgactgtca tgtatattct gatgactgtc aagta 415

<210> 1247

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-B9

<400> 1247

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tcctcctcct cctcctctct ccaacacccc atccatcagc gctgccctcc gcattgctct 120

tgatcccatc cagtacatcg attctccccc caagatcaaa ggccggagga ggaagaaagg 180
 ttanggagtc ggccatggga tgcttttcat gctgctgtgt ggcagatgac gacaacgttg 240
 gcaggaggaa gaagcatgac gatccctatg ttcctatccc tgctcatggt tataattttg 300
 gacctagccg gtccccagcc ccaacccctg tcatctccac tggcagagct cagccaattg 360
 cagtaccggc cattcatctg ggagagctga aggaaattac anaaaacttc agcagtgatg 420
 ccctca 426

<210> 1248
 <211> 401
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A12

<400> 1248

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 acacgacaac caccgcaagt tcacggcccg gccgtggaaa cctgcccacg cgaccttcta 180
 cggcgggccc gacgggtccg gcaccacggc gggcgcgtgc ggggtacaagg acacgcgcga 240
 gcaggggtac ggcgtgcaga cgggtggctgt gagcacgggtg ttgtttggcg atggcgcggc 300
 ctgcggcggg tgctacgagg tgcggtgcgt ggacagcccc agcgggtgca agcccgcgc 360
 ggcggcgtg gtggtgacgg cgaacgacct gtgcccgcgc a 401

<210> 1249
 <211> 125
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A2

<400> 1249

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 gcgcgggtta acgcctccc cgattcgaag gcctcgctc cgccgggggg ccgggccaac 120
 ccgga 125

<210> 1250

<211> 317
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-A4

 <400> 1250

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 aaccttcgcc ggcaaaagca tggcaatggc ttaccgtgtc ctggagggtca ccctgggtgtc 120
 ggaaaatgac ctcaaaaaag tgctcgtctt ctcccgact cgcactctac cgttggtctc 180
 catctccgga ttcgacctcc gcatcccttc caacagcacc caagcaggac acagcaacgg 240
 ctgcaacccc tgctggaaac ccgtggtaca cttccccatc ccggtgccc ctgacacccg 300
 cgggctcgca ctccacg 317

<210> 1251
 <211> 396
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-A5

 <400> 1251

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 agcaagctat atatatatat aggagattct tcgagcgagc tagtagcgag atgggttccg 180
 ccgtcctctt ttactgcac tgcacgccc tcgtcgtcgc attgtcgtcg tccatgggtc 240
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 ggctgtgccc ggtgcggttc gaccacacgc gcggga 396

<210> 1252
 <211> 404
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-A6

 <400> 1252

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 tgctcgtggca gacgtacgtg gacgagcacc tgatgtgcga gatcgagggc caccacctca 180
 cgtcggcggc catcgtcggc cacgacggcg ccacctgggc tcagagcacc gcattccccg 240
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 ccccgaccgg cctgatactg ggaggcacca agtacatggt catccaaggc gaacctggag 360
 ctgtcatccg tggcaagaag ggatccgggg gcatcactgt gaag 404

<210> 1253
 <211> 397
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-A9
 <400> 1253

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 caaggttgca cctgagacca ctaccatcca cattgangtt gcggcaaaac atgcagtagt 180
 tgagaagggtg gaggaggaca aggaggaggc actaacagtg gcggcgaaac aagagccagc 240
 agccaccatt gagcctcagc agattgctag tgaggtgacc acttcggaag tggcggtcgt 300
 cgttgtcgag cctgagaaca aagaggaaga ggaagttgtg gagaagaccg tcacgagaa 360
 ngagaagcca tcagcagtcc atgcagagga aaatatt 397

<210> 1254
 <211> 305
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-025-Q1-E1-B1
 <400> 1254

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 gccccacaag tagcggaggc aaagaagaag atacggcaga gagcggcgag gcggccgatg 180

cgaagaagat ccaagacgac ttctgctcga cgctgtgcga gggcaagaag gggacggacc 240
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 ggatc 305

<210> 1255
 <211> 425
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-B10
 <400> 1255

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 ccctccctgt ccctctgtat ctgcaactgc aagcaaggaa attaattaaa agaaaatcgg 120
 cgccatggcg gcaacgacga cggggatgca gatgatgcag gcggcggcgt tgctgctgtg 180
 cttggttgtg ttggcggcgt ctacgcgggt cgcgctgggc aactgccgcg acgactgcat 240
 ggctgcatgc aacggctgga ccatcgtctg ccagctctcc tgtgccagcg catgctacgg 300
 agaagtcggg atcacaacct taggtacgtc ggctgtatta gcgaaagcag aagcgctgc 360
 atcagcacca caagcagcac aagagcgaag cgccgccgcc ggcgtgtccg cgctcagang 420
 gttca 425

<210> 1256
 <211> 291
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-025-Q1-E1-B2
 <400> 1256

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 ggtccttcga cggcgacaag ccggcctctg acgacgacgc cgtcgacgac gacgaggacg 180
 ccgcccctgt cggcgcgccc aacggggcca ccatgactga gccagggac gacgtccccg 240
 ccccgcccgg ggccgaagca accgcgggcg gcgccgccgc cagcaacgcg c 291

<210> 1257
 <211> 394
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-B3

<400> 1257

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acgttgtcaa caacgactac acgcactggc tcatgtacgc cattggcggc ggcgacgcgc 180
caaccatcat cagccagggc aaccgctaca tagcaccacc aaacatcgcc gccaaagtga 240
tcaccaagca ctacgcggaa gaaggcgtgt ggaagaactg ggtgtggcac acggaggacg 300
acctgttcat gaacggcgcc atcttcaatc cgtccggcgg cgcccccaag caggtcgacn 360
acaacgagtg ggtaaagccc aagccaggaa acta 394
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<210> 1258
 <211> 443
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B4

<400> 1258

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gggtaaaggc cggccgtcat gctggcacac ccgcacggct caagcaccct caaggatgtc 180
caggtcgcct tcagcaacgc cgaccacaag gacagcagca gcaaggtgga acagccggcg 240
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ttcgacctgt caagcctgtt cgaggtggac caagagcaga aggccagcaa ctgcgggttc 360
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cccctcatgg tgaaaaaaca gga 443
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<210> 1259
 <211> 215

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B8

<400> 1259

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 ggaaatttca aatgcacaga tcaatctgtg ggagtatcca accaacttca acatcttgca 180
 tctattattc aggttcttga cccaaagcta catga 215

<210> 1260
 <211> 430
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-G6

<400> 1260

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 aacatctcgg aggtcgaggc cgcggtccgc gccgcgcgt ccgagctgct ccgcgacgcc 240
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 ctcttcgtgg 430

<210> 1261
 <211> 406
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-G7

<400> 1261

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gctgacgagg tgcaaccaag actcgggctt cttccgactg tggaagaagg cggcgctgcc 240
gacgtgccag ggcgcgccg atgccacccc gcgcggcggc ggcgggttcgc accacgtcnc 300
gcggccgtcc atcagccggg gcacgcagcg gctctacgtc cgcctcaaca cgctccacta 360
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<210> 1262
<211> 438
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-024-Q1-E1-G8
<400> 1262

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ccggcgacga ccttcgcgt catcttatcc gtcctcttct gtgcgcggc tggcaccgcc 180
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gccgggttcg tgaccaatgt caccgagtac atcgcgggcg ccaaggtag gctggagtgc 300
aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggtgaccga cggaacggc 360
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<210> 1263
<211> 443
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-024-Q1-E1-H1
<400> 1263

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agggggggcgg tgccatgagg cgcgcgcta tgttctacgt ccacgaggcg gacgtcgtcc 180
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 tggacagggc gaagcaccgg cggaagaagc gcgcggcggc gcacgcgctg tccgcacgca 360
 gcagggagca ccggcaccag cagcagctgc agcagcnnac accacagcag cagcaaccgc 420
 agccgcggaa tgccggcatg gac 443

<210> 1264
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H10

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 gcaaagtgtc tcaggcggct cttgatgtct tcaccgtgga gccccgccc aaggacagca 300
 agctgggtgtt gcatgagaat gtcactgtaa cccccacct tggagctagt actgtcgagg 360
 ctcaggaagg cgtcgtctatc gag 383

<210> 1265
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H11

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 aacgacgacg gggatgcaga tgatgcaggt gcagcaggcg gcggcggttg tgctgtgctt 180
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tgcatgcaac ggctggacca tcgtctgccg gctctcctgt gccagcgcat gctacggaga 300
 agtcgggata acaaccttag gtacgtcggc tgtattagcg aaagcagaag cgcttgcata 360
 agcaccacaa gcagcacaag agcgaggcgc cgccgc 396

<210> 1266
 <211> 450
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-024-Q1-E1-H2
 <400> 1266

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 cggcgtggtg ttccggaacg acgcgccgct ggccaagccc ggcgccaatg gcggccaggc 180
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 cagcgtcgac ttcatcttcg gcttcggccg cagcttctac gaggactgcc gcacgcagtc 360
 ggtggtcaag gaggtggcgg tgctgacggc gcagcagcgt tccaagtcca tcgaggcgcc 420
 catcgacacc ggcttctcgt tcaagaactg 450

<210> 1267
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 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-024-Q1-E1-H3
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 acacgatacg gtgcatcacg tgcacacac cgtaacggag gcccttggga catcactttg 180
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 cttgggattt cagagtggca ca 262

<210> 1268
 <211> 409
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H4

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 acgccaagaa ctcccaggac ggggtcaccc cggagcagcg ccgcgagagg gacaagaaag 180
 ctctggagga gaaggcggcc aagaaggcgc agcaggcagc ggccggcggc accggtacct 240
 ccacggacaa caacaagaac aaggcaggtg gcaagaagta ggaggcagtg gcgcgccgcc 300
 acctctgtac gattaatcga tgccttgagc ttgtaacttg ttgcatacct tgtaggtgcg 360
 atgcttggtg ggtcataaac tctgatgata tcgagatttg gtgatgaga 409

<210> 1269
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H5

<400> 1269

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 ggcttacctg cgggacaacg agtacatcca ccgccactac cgctgcgagt ggccgctccc 180
 gcaagttctg ctctccgcct tctccatcca caacgagacc ctcaacgtct ggactattac 240
 agaggaggca aatatagata ctccagtaaa ggaaatgagg atgctgaaga gaaaaagcta 300
 gcttgggagg aacgggagat cgattcttgc ctgactctga ttgcaatgcg tcgaattggc 360
 aaaatattta cgcgtttatt tctgcttgt gcttaattcc tgcgtgtgtt tctg 414

<210> 1270
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H6

<400> 1270

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ttgtcctgcc cgtcaattcc aaggactgct gggccgacac ccgcgtcatc tgcaccaaga 120

cgcacaactg ccgggacgac acttgcgcg ggcgcggcat gccggacggc cgctgccact 180

gggagttccc caacctggtg cccttctgcc agtgcttgcy cccaactgc cactagtccg 240

ggcgccctcg attggcacac ttcgccggcg atgatggatg gtgcccact gcgactgccc 300

agtctgctcc attcgttgtt gtttaaggca taatatataa actgccaaat tcacatgtat 360

tttgggatat ttgttatcat actatgaaat gactgtgaat cgttgttctg atttgggtctt 420

caccacatgt tttccttgc 439

<210> 1271

<211> 199

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H9

<400> 1271

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaataag gaaagacaag ggaggtggtc 120

ctggaggatt gttagcttgc atgcccgctc atgggatgct aaatcacttc catggtgtca 180

cctaatttga cttccttgg 199

<210> 1272

<211> 263

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A1

<400> 1272

gccacatcta ttaggtgcaa ccatgggtgc ctgttcaacg aagcctaaga cgcttgatgg 60

gaaagcccca gctgaagcca ccatctccac acccaagggt gcacctgaga ccactaccat 120

ccacattgag gttgcgga aacatgcagt agttgacaac gtggacgacg acaaggacga 180

ggcactaaca gtggcggcga aacaagagcc agcagccacc attgagcctc agcagattgc 240

tagtgacgtg accacttcgg aag

263

<210> 1273

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-G4

<400> 1273

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acgcagtaca gcgagtacaa gaactgggtg tggaagtcgc aggacgacct gttcctcaac 120
ggcgccttct tcaaccagtc cggcggccag aacgagcgca agtacgacag gctcgacctc 180
atccaggcca agggcggcca gtacgccgag tcgctcacca ggtacgccgg cgcgctcaac 240
tgccgcgtcg gcaggaagtg ctagtcgtg tgcagctcta ggctgcagct ttcattcattg 300
gcgatcgatc gtaacaatgc aaggttgtgt tgtatataac tcttggtgtt ggaatgccgc 360
ccgtaattaa tggtaactc taacactgct tgccttt 397

<210> 1274

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F10

<400> 1274

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tccctcacca aataaggtcc cgcccttttc cgacattcac aggggggaca ggaaatcagc 120
ggccatggcc tcgattccgg cgacgacctt cgccgtcatt ttatccgtcc tcttctgtgc 180
cgcggtggc accgccgtcg acaacgacct ccccgactac gtcattcagg gccgcgtcta 240
ttgcgacacc tgccgcgccg ggttcgtgac caatgtcacc gagtacatcg cgggcgcca 300
ggtgaggctg gagtgaagc acttcggcac cggcaagctc gagcgtcca tcgacgggg 360
gaccgacggg aacggcacgt acacg 385

<210> 1275

<211> 419

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-F11

 <400> 1275

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 tccgccgagg cgacgtcctc agtcccaggg tcacgtcttg cggcggctcc cccaagaacg 120
 ccttcacgct cggcgagtcc aacacgttcc cgcccgccct caaggactgc gcgcgcatca 180
 accccttgaa gcccgacgct cgggtgggcgc tggaccagat gcccgaggcc cgcaccatgg 240
 gcgacctgct gatcctgccc accggcgacc tgctcattct gaacggcgcg gccaaagggt 300
 gtcgccgttg gggcttcggg cggcagcccg tgctgagccc gtcctgtac tctccgcgcc 360
 atgcgcgggg ctgcgggttc cgggcgctgg cgcccaacac catcccgcg atgtaccac 419

<210> 1276
 <211> 447
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-F2

 <400> 1276

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 ggggccgcca gcagggttcag ccgttcctgt tcttgctaaa acgagagaag gatggcagtg 120
 tctcagggag ctgtcctatt cttgtttctc ctgcgcgag cagaggtggg aaccatcgat 180
 gccaaaatgg gagtagccat gcccatgcat gccttgataa tggagaaagc gaaacagcag 240
 gagacggaga agaaggagga gaaaagcacg gagaaggaag agagtcaatg cttatcgccg 300
 agtctccagt tcgagggttc ctgcttcaac agcgacagat gcgccgatgt gtgcatgaag 360
 gagagctttc ccggtggcga gtgcaagcag gtcgtggcca cgcgcaagtg cttctgcaag 420
 aagccttgct agttcatcgg tcttgct 447

<210> 1277
 <211> 81
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-F4

<400> 1277
tctacagtgt gtctgattca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60
aaaaaaggag gacaaacagg a 81

<210> 1278
<211> 447
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-024-Q1-E1-F5

<400> 1278
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cggcacggtt caaccaatgg cgggtggcccc tcctacggcg gcggccctgg agcagctaag 120
cagcagcaag atgtttcgac ggcttcaatc tccgcttccg ccaccagagc gccacccttg 180
gctgcgccat gactttctcc atctacctgc ccccgctccc ggcgctccaa cttcccgtgc 240
tgtactggct ctcggtctc acctgcaccg acgagaattt catcataaag tccggcgccc 300
agcgcgccgc cgctgcccac ggcatcgccc tcgtggcacc tgacacctcc ccacgtgggt 360
taaattattga aggagagtca gacagctatg attttggtgt gggtgccggg ttttatttga 420
atgccacana tgaaaagtgg aaaaact 447

<210> 1279
<211> 395
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-F6

<400> 1279
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ggttaacggc cgcacatca ggaagcggat cgatgtccgc gtggagcatg tgcagccctc 180
ccgttgacag gaggagttcc gcttgaggaa agccaagaat gaccagctca acgcggatgc 240
caaggccccg ggtgaggtga tcagcaccaa gacgcagcct gtgcgaacca cacctggctt 300

catggttgag ggtgctacac ccgagacagt cactcctatt ctttatgatg tgggtcaacga 360
tctcaagggc gggtactaga tagaattttt gtacc 395

<210> 1280
<211> 424
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F7

<400> 1280

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caacctttgc cccaatcaaa accatgcatg aatcaaaggc gtcgtcaaata caaaagaaag 120
gaagaaacaa aatgatttgt ggggtggggg tttggtgcat ggccgtcgct gttaaaattc 180
gacacacgac agttgcgtaa atagacctag cgtaatcagc tgcacaaaacg aatgagagag 240
cgagcgaagg aagcaaaatc tgggtgagga gatgaataga tgatgacggg agcgcggcgc 300
ggcctggcag actgggccta agcacctgct ccgatccatc tgctctgctg ggcctaagca 360
ccgccgcgga gtttggccat gttcctcttc ttcctctcct ccagggccgc cgccccctcc 420
tgct 424

<210> 1281
<211> 346
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-024-Q1-E1-G11

<400> 1281

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cgcgctcccc ctgccgcacg ggaccaacct gttcgctgtg tcatccactc agcgacattc 120
acgcccgcac ctgccgtgg gcagcaccgc actcaccacc gccgtcgcag tgaggtcacg 180
agtcagctga agagcaagtt ggtacctgga atctcaagtc ncaggtcaag aacaggtacc 240
gcaggatgag gcgcatggag gatgctgtgg cgagttcgtg agaggtctag gccatcgtct 300
cccagtcaac tttgggttgc tggaccgttg tccccttata atgaaa 346

<210> 1282
 <211> 398
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-G12

 <400> 1282

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 accagatacc cggcgggcggc gatcgatggc tccgcgcagc tcatcgggcg cgacgtgcct 120
 gtgcctcgct ctgcgcggcg ccacgctggc gctggcccac tgggcgcaag gaggaggacc 180
 atcggcatcg gcgggcggacc tggacaaggt cacggccgag accttcttgg acatcgagat 240
 cgacggcaag cctgcaggcc ggatcggtgt gggactgttt ggggacaccg ttcctaaaac 300
 agcagagaac ttccgagcac tttgcacagg ggagaaagga attgccaaagt ccggcaagcc 360
 tctgtggtac aagggttgac gttccacagg atcaccgc 398

<210> 1283
 <211> 446
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-G2

 <400> 1283

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 gaccgccaag accagctctt ccgtggagaa gagctacgag ctccccgacg gacaggatcat 120
 caccatcggc gccgagcgct tccgctgccc cgaggctctc ttccagccat ccttcatcgg 180
 gatggaagct gccggcatcc acgagaccac ctacaactcc atcatgaagt gcgacgtgga 240
 tattaggaag gacctgtacg gcaacatcgt cctctccggt ggcaccacca tgttccttgg 300
 gatcgctgac aggatgagca aggagatcac tgccttggct ccagcagca tgaagatcaa 360
 ggtggctcgt cctccagaga ggaagtacag tgtctggatc ggaggattca tcctggcatc 420
 nctcagcnac ttccagcaga tgtgga 446

<210> 1284
 <211> 459
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-G3

<400> 1284

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taccctaaga caaaggggaac tacgtatggt tatggaaactt tctttaagcc atatatttct 120
cagcatgaga atgaaatcga ccgaaatctt cttgagctca gagctcgagc caccgatatg 180
gttgctccttt acttccataa ggctgcttcg gtagggcaaa atactttctt tgacgtttta 240
aaatatgttg ctgcccagtc ccttctcgg aaatcaaggc tgcaccctca tcaggaacca 300
cagcagcagc aaccacaagt gcaggtggag ctgcagcagc aaccacaagt gcaggtggag 360
ctgcagcagc cgcaaccaca aaaacaagca gcacctgtta tgcgcagagg agcatctatt 420
gctgctcggc aagcagcaat ggcacagcaa tctctggag 459

<210> 1285

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D7

<400> 1285

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gcgtgaggaa ttccctaattc aagccagccc atcagacca gagaatttcc catttgttgt 120
gcttggtaac aagatcgatg ttgatggtgg taacagccgg actgtttctg agaagaaggc 180
taaagcatgg tgtgcttcaa agggaaacat cccctacttt gagacgtcgg ctaaagaggg 240
cttcaatgta gaggctgcat ttgagtgtat agcgaggaat gctgtaaaaa atgagccaga 300
agaagatatg tatcttcttg atacgattga tgttgggggc gctggaaggc aacaacgttc 360
gtcaggttgt gaatgctaga agatatggag cactgcgatt tgctcggttg gttggtctga 420
ttctctaggg cttgttttgg ttggcct 447

<210> 1286

<211> 404

<212> DNA

<213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-D8

<400> 1286

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 tgagaacatg ttgggtggca agaaagttac agttgtatct gttctaggtg gtcctggaag 180
 tggaaaaggc acacagtgtg ccaacatcgt ggagcacttt ggattcacc c atcttagtgc 240
 tggagatcnt ctgcgtgcag agattaaatc tggctctgag aacggaacca tgattgagaa 300
 catgataaag gagggaaaga ttgttccatc ggaagtgact ataaagcttt tgcangaggc 360
 aatgataaaa agtgaaaatg acaaattcct gatcgatgga tttc 404

<210> 1287
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D9

<400> 1287

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 acgcaccggt gcatatatgg ggctcctgaa ccagctgtgg gacgacacgg tggccggggc 180
 gcgcccggac tccggcctcg gcaagctccg caactgcagc gacgacgccc aggggagagg 240
 gctggacgaa gaagctgcgc gggaaagcca ggatgggcgg cggcggcggg gacgacgccc 300
 ccggcacgcc gagggagccc accgtgtacg actgggtggg gatcagttcg ctggacctct 360
 gaagcccaag ccaagacgag aactgcacaa ggaacccac caccaccatc aacacagcta 420
 gcgaa 425

<210> 1288
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E1

<400> 1288

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 ttccggcgac gaccttcgcc gtcatttat cgtcctctt ctgtgccgcy gctggcaccg 180
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 gcgccggggtt cgtgaccaat gtcaccgagt acatcgccgg cgccaagggtg aggctggagt 300
 gcaagcactt cggcaccggc aagctcgagc gctccatcga cggggtgacc gacgggaacg 360
 gcacgtacac gatcgagctc aaggacagcc acgaggagga ca 402

<210> 1289
 <211> 431
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-E11
 <400> 1289

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 gaaaccttga cgggcagggc ccagccgtgt ggagcaagaa ctctgcacc aagaagtatg 180
 actgcaagat ccttcccaac tcgctgggtga tggacttcgt gaacaacggg gaggtgtccg 240
 gggtcacgct gctcaactcc aagttcttcc acatgaacat gtaccagtgc aagaacatgc 300
 tgatcaagga cgtgaccgtg acggcgcccc gggacagccc caacacggat ggcattcaca 360
 tgggcgactc atccgggatc accatcacca acaccgtcat tggcgtcngc cactgactgca 420
 tctccatcgg c 431

<210> 1290
 <211> 394
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-024-Q1-E1-E12
 <400> 1290

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 acgggactga cgtcgaggat gaagaagagg acgaggaagg taacaagcga gtcgtggtgc 180
 ttggccccca ggtccccctc aaggagcagc tcgagctcga caaggatgat gagagcctga 240
 ggaggtggaa ggagcaactc cttgggcagg tcgacacaga gcagctggga gaaactgcgg 300
 aaccagaggt caaggtggtg gacctgacga tcctgtcacc tggcagaccg gacctgatcc 360
 ttccgattcc gttccaggct gacgagaagg gcta 394

<210> 1291
 <211> 211
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E3

<400> 1291

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 tcagtccgtc taacaatcga ggtcgatgac gacgtcgccg cgcgtgaggg tgctcggtat 120
 agcactggcg ctgcctgctg tgctgctcgt gaggtccgcc gacgtgctg ccgagggctc 180
 ccctactcca ggcggtcca cctaagggtg c 211

<210> 1292
 <211> 357
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E4

<400> 1292

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 ccgtgctgac cacggtgccc ggcgtcgctc tcgccaagtc gaagctcgcc aatatgagcg 120
 acgacgtctt gaacgggccc ctctgaccg agaagatcta ggcgaagaac acgctgatcg 180
 tgaggccgga cgaggagttc aagaccgtac agtccgccat cgactcggtg cccgccgggt 240
 acgcgcagtg ggtcatcacc tacgtcagct ctgggctgca caggggcaaa gttgtgatac 300
 gggagaaaaa cccttcatct tcctgagggg caacgggaaa ggccgggact ccattctc 357

<210> 1293

<211> 408
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-E5

 <400> 1293

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 gattctcatg acgacgtccc cgcgcggtgtg gctgctcgcc atggcactgg cgctcgccctg 180
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 gctgccgggc ggcgccatcg acctcgacgg cgacggtgac gaggacgagc tgccgcagtt 360
 ccaacccccac ctcatgatcc tcggccatgg cactgatga gtgtaaat 408

<210> 1294
 <211> 448
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-E6

 <400> 1294

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 tcaggggagg aagaaagggg acgacggcac gagtttaaac caacaatctc tcgtcatata 120
 tatcataata gagagtacga cgacaaaagc catgggcagt aatggcagac atcataggcg 180
 cggagtccca cgcccggcac ctttaccact ttacagggat tgggaggagg aagaggtcgc 240
 caacaataag aggctgtcga agcagctgtc catgaacgag accaccatgg aggtcaagtg 300
 ggagaagcgg aagcggcaga tacaacggca gaggagcagc atgcgcctga gcgaagccga 360
 cgacagggca ggtggcagca ctgctgtctg tcctgttgac ggcgaggcga gctcgagcgc 420
 ggagcgggtg gccactggta taaccgac 448

<210> 1295
 <211> 431
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E7

<400> 1295

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ccctcgacta cgaggccacc ggggagtcgc tcgtgtacag ccagctgtac ccgttcgagg 180
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acgcgttcg cagcatgccg gctgtcgggc ctgggagcta gcccgggccg attaccttgg 360
tcggggacct cgggaccacc tactctacca cctcgactgt gggacacatg gtgtgcaaat 420
gcaccgatct g 431

<210> 1296

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E8

<400> 1296

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acagggggga caggaaatca gcggccatgg cctcgattcc ggcgacgacc ttcgccgtca 120
tcttatccgt cctcttctgt gccgcggctg gcaccgccgt cgacaacgac ctccccgact 180
acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc cgggttcgtg accaatgtca 240
ccgagtacat cgcgggcgcc aaggtgagggc tggagtgcaa gcacttcggc accggcaagc 300
tcgagcgctc catcgacggg gtgaccgacg ggaacggcac gtacacgac gagctcaagg 360
acagccacga ggaggacatc tgcgaggtgg tcctggtgga gagcccgcg c aaggactgcg 420
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<210> 1297

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D5

<400> 1297

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ggatcatgagc gcccgcctaa ccatggcgcc ggcggcgccc gtgcgcgcct ggggtgggtggc 120

gctggcgctg gtgctggcgt gcgcgctgct ccagccgcgg ccgtccgacg ccgcgggcgca 180

gcccgcctcg cagtcgcggg cgacggcggt gtcgtcgggc gccgccaagc ccaagtgcgt 240

ggccggcgcc aggaacgacc acgcgtgccg cgtcggcgcc gtgcacgacc cggacagcca 300

ggaggaggag ggctccagcg tcaccatcga cgcgcccgcc gccgcgcccg acgacgtcgg 360

ccacgacgac ggcagcgact acaacgaccc cgacgtgccc aacaacgaac agctcg 416

<210> 1298

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-C3

<400> 1298

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ctccctggca tggaggaagt agctgtttcg cctatgatcg ttgccgcgt agtgctggac 120

aacaatggcg ccgacgcggg ctctgcact gccatcccta gcgtaacaat aagcctagag 180

gagaaagaaa atatcaatgg ggatgttccc acgatcacct cggccgcaag caacgaggag 240

gaggcgttgt tcagtgtcgg agaatccacc aaggacgatg gccatcgctt gacgatggaa 300

tgcaccactc ccgtctctc cagtagccct tccactcgca agaagcgcg ggcgttcagc 360

ctcttcaggg cgatgttctt gtccttcggc cggagcgacg acagcatgaa gaagacagac 420

gacgacacca cgagcccc 438

<210> 1299

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-C4

<400> 1299

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 tgacatatctg aaaaatgtgg aatatgatgc tctgaggggtt attttcaaca agttccaatc 120
 tgtcatatcg tttaagccca caatggtaac aatactttcc cccgaggttg cagaaaaaga 180
 atcagaagct ggtgggaaga tgggtgacct agattcttat gagattgaag gcggcgagac 240
 anaatcagag attttgcaga atctagctga gttccagttt tcttgtgtcc tgtacaatgg 300
 tgcncatagag aatgcatgca gtgagcttgg agcccgatg tctgccatgg acagctctag 360
 cagaaatgct ggcgatatgc ttgatcgtct cactctcact tacaacagga cagccaagc 420
 atccaatcac acagagctta ctg 443

<210> 1300
 <211> 301
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-C5
 <400> 1300

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 acgagcgtgc cggcggcgag accaacagag acgctcaaga acgaggaaca ggaggtcgac 120
 gagctgctga tgcagttcga cgagaaggag agcataagca cctcctccat tgaggagcac 180
 ctgcaagaac ggctccctga cgctgtcgat ctgaaagccg tggatctcga cagcagcatg 240
 acgacgtcct cctcctccag tcaggaggag tgccaggatc acgagtgaga agcggcggac 300
 a 301

<210> 1301
 <211> 457
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-C7
 <400> 1301

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 tccgcggcct gcaggtccgc cgcgccggcg ccgacgactg ggtcaccgtg cagcccgtcc 120

gcgacgcctt catcgtcaac gtcggcgacc aagtccagat actgagcaac tccgtgtaca 180
agagcgtgga gcaccgggtg gtcgtgaacg ccgaggagga gcgcatttcc ctgcgcgtct 240
tctacaaccc caagggcgac gtcccatcgc ccccggcgcc ggagctggtg gcggctgcga 300
gcctgccggc gctctacccg acgatgacct tcgacgagta caggctctac gtcaggaaca 360
agggcgccag gggcaaggcg cagatcgagg ctctcaangg gcaggggaac acagaaagtc 420
aattatagac gacgactagc tagctactag ctagtac 457

<210> 1302

<211> 412

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-D1

<400> 1302

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ggcaaggcct tcggctccct ggcaaagccc gggctcaacg acaagattcg ccaactgcggc 120
atcatggacg tcgagttcag aagggtgcga tgcaagtacc ccgccgggca gaagatcgty 180
ttccacatcg agaagggctg caacccaac tacctggccg tgctggtgaa gtatgtggcg 240
gacgacggcg acatcgtgct gatggaaatc caggacaagt tgcgggtga gtggaagccc 300
atgaagctct cttggggcgc catctggagg atggacactg ccaaggcgct caagggcccc 360
ttctccatcc gcctcaccag cgagtccggc aagaaggta tcgnccaaag ac 412

<210> 1303

<211> 210

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D10

<400> 1303

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ataacacctc gagtaggagt tgaagtacat gatcattgat ggtatatata tagaggaagc 120
atgtctatct aataagtccc tcatcaaaa ttgttcttta tgtcatgtat atgtacgtgc 180
atatatatat ataaaaatac gtctcctttt 210

<210> 1304
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D11

<400> 1304

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 ccgggcacca tgtctttcac cggcacgcag gacaagtgca cggcgtgcga caagaccgtc 120
 cacttcacatg acctcctcac ggccgacggc gccatctacc ataagacatg cttcaagtgc 180
 agccactgca aaggggtcct ctcgatgtgc agctactcct ccatggacgg tgtgctgtac 240
 tgcaagaccc acttcgagca gctcttcaag gagaccggga gcttctccaa gaacttcacg 300
 ccagggtggca agtcacacga caagggtgaa ctgacaaggg cccaagcaa gctgtcgtct 360
 gcattttctg ggtaccagga taagtgcgca gcatg 395

<210> 1305
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D12

<400> 1305

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 gttcatgacc cagaagccgg cgtcggcgat agtgtcaaag ctggagcaga tcgctgagac 120
 agagcgcttc atggtgaaaa aacaggacgg gctggtgaag ctgcaggggt ccaagcaagg 180
 gaggaagggg cagctcgcga tcgacgccga gatcttcgag gtgacaccgg cctttcacgt 240
 cgtcgaggtg aagaagtcgg caggcgacac gctggagtat gagatgttct gcagcaaggg 300
 cctaagacct tcaactcagc acatctgctg gagcagccga tctgaggaga acatgggtcc 360
 ttcagtggtt cagccatcat aattgaagcc atcctc 396

<210> 1306
 <211> 294
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A1

<400> 1306

acaacaccct agaatgagtc gtatgagctc aagctggggg caacagaggc ggttctactg 60
tcagcgtag agagtttctt tgacgttggt ttgaactatc caaagatcaa taggagggtta 120
tgtgacgtga tggagctctt gtcctggaag caacccaagt gcccacaatt gtacatatatac 180
agctccgccg acaggggtgat cccagcgaaa tcagtggagg cattcatcga cggccagcgg 240
aaagccgggc atgaggtgag ggcctgcgac ttcgtgtcat cgcccatgt ggac 294

<210> 1307

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A11

<400> 1307

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ggatttgccc aatgctctag atataagggc cttcgagagg atgacgaagc taggccactg 120
cgatgtggag cttcttagaa aagagatgaa tgagactgat gtccccgtat cttactcagg 180
cactggcatc cctgagaagt caatacgcaa agcagctctt gaggttattc tccgcaggct 240
cctctctttt ctcaagccag acacctttca ggggtgccatc aaggcaatca acgaaagaat 300
tctctctgtc cttgatgctc ctggttctgg tcgtgttgat ctgggtatgt tcttcgccat 360
cattgtcca atctgttcag gccctgtgga taggcgcaag cgtatcgtct ttgatgcact 420
tc 422

<210> 1308

<211> 417

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-A12

<400> 1308

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caaacgtttg gttattatca gacacatggg aaaccagctt gctgcgagcc atcacaggct 120
 gaaagggtaca cgctgcatca gcaggctgcc tatgcctgcg caaaccgtag agccgcgtct 180
 gatgttgctc tggacatgag agcaccacct tttcagcatc tatcggcagg gcagagaagt 240
 gactcttggtg ataggctgac agcagagaca aacttgtaga cgagatcaac caacggcatc 300
 gctgccactg cagcaggagt ggcagcaact actcacagaa aggtcggcgt tgttccgttt 360
 ggcattgtcan acatgtttata gtgactggat catggccgaa tcatggtgaa tcctctg 417

<210> 1309

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A2

<400> 1309

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 cgcgcgccac agctgcgggc ctcttctaca tctcgcgct cgctgcgctc agcgcgccg 120
 aggcaccggc agagtcaccg aaggcaggca gtctgcgcaa ggcaccggcc gagtcaccga 180
 acgcaggcag tctgcagct cctgccaaagg caccgagtc tgctgccacg agaactgccc 240
 ccgctaattgc acctcaagcc gctccaccc ccgcggttgc cgctgcccc tctcgtcgt 300
 cgtctaggaa gtctgggtcca gctgccgcgc cgaccaccgc cgctcttaca ccgtcgtctt 360
 ccacggacga ggagttgagc ccttccgcgt cgggatccac cgccgacgtg gcgtcgctg 420
 ccgctgatgg 430

<210> 1310

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A4

<400> 1310

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 ctctgcaaaa ctccggagag gccacgtcca aactacgtat acacgaagaa gtctcaccgg 120
 agaactgctc tgctcttcag agtccaagg aggtgcacc tgacgcatgt ggggttgaag 180

actccgtgga cgtggagaag ggcaagggct ctcaccaaga ctccaaagac gatgtacctg 240
 tcagtgaagag atgtgaacag tggctccatg tgctgaacaa gaacgatgct gagagcatga 300
 gtgagaaaca taagttggtt gagcagatca ggatcctggt gaagaacgac gacgaacttc 360
 ggaactatgc aggtgctaata ggtattactg agccactaat ccattttctg aagatggcta 420
 tccacagagg aggtgtgcaa tct 443

<210> 1311
 <211> 275
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-A8

<400> 1311

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 gattgttctt ctggcagtag taagactaga aggatcggat cggagtcac agcctatgtc 120
 gaggtcaggt tcgggaatgg ccgtctgtga tgaatgcatg ctcaagttcc aggatctctc 180
 cgcattgcagg agcttcggct tcattcgtgt caagatgaac cagaacgtgc agcaggttgg 240
 tttggacagg ctgcgggggc caggagatat tctac 275

<210> 1312
 <211> 251
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-B1

<400> 1312

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 ccgctgcctt ttggtgcttt gggaaattgg tgcgtggatt gcgaggaaag ttcaggggca 120
 cagatcaatc tgtgggagta gccaaaccaac ttcaacatcg tgcattcatt agtcagggtc 180
 gtgacccaaa gctacatgac gacctagaaa ctcttggcgg ctgtgactag ctttttgcgt 240
 gccggctgtt c 251

<210> 1313
 <211> 378
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-B3

<400> 1313

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ctctttctgca tcgtgcatgg tgagaaggaa gagtcaaagg gcatcgatgc gaaagcgtec 120

gggcctgggtg ggctccttcga catcaccaag ttggggcgct cgggcaatgg caagacagac 180

agcacgaagg ctgtgcanga ggcattgggca tcggcgctgcg gcggcactgg gaagcagaca 240

atcctcatatc cccaagggcg acttccttgt cngacaactc aacttcacan gcccttgcaa 300

agggcgacgt tgacatccag gtggatggca atctgctggc gaccaccgac ctaagccaag 360

tacaaggaac atggtaat 378

<210> 1314

<211> 85

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-B5

<400> 1314

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tactctttgg ttctttgaaa gaatt 85

<210> 1315

<211> 199

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-B7

<400> 1315

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ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag gacgacttct gctcgacgct 120

gtgcgagggc aagaagggga cggacctggt cgtgtgcaag gagtcctgcg cgctctccca 180

gcagttcaac ctggtgctg 199

<210> 1316
 <211> 294
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-C1

 <400> 1316

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 ctgccacgcc cgaaccgtac gcatctctga acgtcgccgg cggcgggcag cccaacgagc 120
 cggcggcggg gaggccgccg aagctgtcga tggagacgtt ctcggggatg atcaagaggc 180
 cgttcgccaa gttcctgagc ccggtgatca agagcgtgtg cgccaagacg gagtaccgcg 240
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<210> 1317
 <211> 399
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-C10

 <400> 1317

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 acaacaaatc cttgttcggt tatttctaata acatatggat tggatgagat tggaaaaaat 120
 taagaagaag tttaacttgt ttgcgattca aacacatcca atctcattca attcacatgg 180
 attgagagct aaccgaacaa gcctgtagtt ggacaagggg gtaacactta tttgtcaggc 240
 gtaccgggca cagaccgctt cctatttgtt cgtgggggatg taactgtaag ctttgtgacc 300
 cctaagcagt ctgcgtcttg tgctgtctgc tgtagcggta gagcagagag agagatcaaa 360
 tgtaaattac atttnttagc tcaaattcac gacannnaa 399

<210> 1318
 <211> 271
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-G5

 <400> 1318

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agatcaacgc acagcttttg cacatgagaa tatccagaca cagccagca agagggaaga 180
ggaaaaagaa tctctatgac aactgaggaa taacttggac gtccgagcat aacgcatgtg 240
atacttcgag cactacggac acccaccaaa c 271

<210> 1319
<211> 399
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-023-Q1-E1-H10

<400> 1319

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accgacctgc tgtccaacta ctgggccgcc atcacggatc tgcactccat cggcgcgagg 120
aagttcgcca tcatcaacgt ggggctggtg ggggtgctgc cgggtggtgag ggtgctggac 180
goggacggcg ggtgcgccga ggggctcaac aagctggctg aagccttcga cgtcgcgctg 240
ggggcgctcc tcgccggcct cggcgacaag ctgccggggc tgacctactc gctggccaac 300
tccttcgcc tgacgcagga cgccttcgag gaccgaagg cgtcagggtg cagcgacgtg 360
gccagcgct gctgcgggag cngggggctg ctgggcgga 399

<210> 1320
<211> 389
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H3

<400> 1320

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tcgtcagcca agaagcgttt gtcccaggcg ttcgaggtca acccgagtgc ctcagcgccg 180
atcaagggtg cgttgagag ggtaaagcgg cactcgcagc taatttccag tcacaggatg 240
tcgctgtcct gagtcaaagc aggagatggg acgcaaagtg ttgtgattat acgatacgtc 300

gggtgacact tgtgttttcc ttttgcggtgt gtacgtatta cttgttacgt gtgacatggt 360
 gggatttttt gtgcctacat atggtgggg 389

<210> 1321
 <211> 446
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-023-Q1-E1-H4
 <400> 1321

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 gaggtacctg ctacgactag ctagattcca cgcccgatgg cgcccaccag gatccgcgtg 120
 gccttgctga gcttggcgct ggtggggctg ctcatctgcc acctcgccac caccgcctcc 180
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 tattccgaca tgaagctggc tgatgagacg ggatctgctc cggctccggc accggcgccg 360
 gggccgacga ccagttgaag cgaggaaggt ggccaaaaac tgagggggcc ggctactatc 420
 ttttgctata actaaagata gggcca 446

<210> 1322
 <211> 302
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-023-Q1-E1-G3
 <400> 1322

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 cctgctgcac caccttcctg atgaaagtgt ctcaattatg aaccaaaggg atcggcttct 180
 ccgtatggtg aagggtctcc gaccaaact agtgacgttg gtggagcagg acgcaaatac 240
 taacactacc ccattccctt ccaggttccg ggaggtctat gactactatt cggcactttt 300
 tg 302

<210> 1323
 <211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-E9

 <400> 1323

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 tcatctattc atctcctcac ccagatcttg cttccctcgc tcgctctctc attcgcttgt 180
 gcagctgatt acgctaggtc tatttacgca actgtcgtgt gtcgaatttt aacagcgacg 240
 gccatgcacc atacccccac cccacacatc attttgcttc ttcctttctt ttgattcgac 300
 gagcctgtg attcatgcat gctctcgatc gaggcagagc tgttgatgtg tgttatgggtg 360
 tactattcta tttttttatt tagaaagttt tg 392

<210> 1324
 <211> 393
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-F3

 <400> 1324

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 cccttccctt cttcttcttc ttcttcttct ctcaaaaacc caatccatca gcgctgccct 120
 ccgcattgct cttgatccca tccagtacat cgattctccc cccaagatca aaggccggag 180
 gaggaagaaa ggtaggggag tcggccatgg gatgcttttc atgctgctgt gtggcagatg 240
 acgacaacgt tggcaggagg aagaagcatg acgatcccta tgttcctatc cctgctcatg 300
 ttataattt tggacctagc cggttccag cccaacccc tgtcatctcc actggcagag 360
 ctgagccaat tgcagtaccg gccattcatc tgg 393

<210> 1325
 <211> 420
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-F4

<400> 1325

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ttactggcac gccaaagctta tgacctgata gagagccata taaaacgcct tgatgaagac 120
ttggggccagt ttgcagaaga tttaaagcat gaagggaaga tacctccaga tgaacctaca 180
gtccttcctc cagttccggt ggtagcagg gatgagaaaa ggaggtttgg ttttagtaca 240
cctcaagcat caaaaaaatt tagagagagg gaatgggaca gggaaagggg tatggacttt 300
gatttaatgc cccctccagg tagcagcaag aaagcaggta catctatgga tgtggatcan 360
acaattgatt caaatgaacc gacatactgt atatgccacc agatttcaaa tgggtgacatg 420

<210> 1326

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G10

<400> 1326

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gccggcgacg atcgaggagg gaggaacgcc agagaccggg cggcggcgac gatggctccg 120
cgcagctcat cggcggcgac gtgcctgtgc ctgcgtctcg ccgcggccac gctggcgctg 180
gccacggggg cgcaaggagg aggaccatcg gcatcggcgg cggacctgga caaggtcacg 240
gccgagacct tctctgacat cgagatcgac ggcaagcctg caggccggat cgtgctggga 300
ctgtttgggg acaccgttcc taaaacagca gagaacttcc gagcactttg cacaggggag 360
aaaggaatgg ccatgtccgg caagcctcta tggtagcagg ggggt 404

<210> 1327

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D3

<400> 1327

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aacaaccgca aacgggaaga aaggggtccc aattggccaa ggctgttacc ggctcattgg 120
 tggtaatcat caccaggggc ccccgcatg tcatcaacgt cggatgacta ggacgctaca 180
 gagaccacaa ggagctgaac gacatcacgg tacgagcact gcgtgctcaa aaatactaac 240
 aacggcgtgc gcaacaagtc gtacgtgaat cccgactccg ttctgactga ttgcgcatgc 300
 accttcgaca tcatcatgat ggaggacgta gccaaaccca tcgtcatcca tcagtacttc 360
 tgcccgcata acgtatgccc tggca 385

<210> 1328

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D4

<400> 1328

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 gtcaaccaga tggttgccga cgccagacac tacatcgaca aagactacaa tgagcatatg 180
 aagcatctgc atgacacgaa acacagactg tgtagtctag aaaacaaaact aacggacgtc 240
 tgatgtgtcc gaccaggagg tcaacagcat cctgaagcag ttcgataaga aggatatgga 300
 gtacatgcag ttgcagaggc acattgttaa cgtcaaagat ttcgagctgc taacaatgat 360
 atggaacgga gcttttggcg acgtcag 387

<210> 1329

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E3

<400> 1329

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 ggggccaaaga acaacttcaa gtacaagtgg gaaccaatg gacaaattcg gaactttctc 120
 cacttcccgt caatcggatg caacgggcgg caggcgggta cggcgccatc agcgtgggtga 180
 gccccctcct catcacggtc gccttcgacc agccgccgcc ggagagcgac cacgcgggtgc 240

tcatcggcga ctggtacacc aaggaccacg aggtgctggg gcgccagctc gacgccggca 300
agagtctggg ccgccccgca ggcgtgctca tcaatcgcaa tggatgcaca gatcaggaag 360
ccacaac 367

<210> 1330
<211> 385
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-023-Q1-E1-E5
<400> 1330

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tcctggggcc ctgccgcccc gccgtggccg tcgaccacgc gcagctcgcc gaggccttcc 180
gcgccttcga ccgcgacggc aacggcttca tctccgcgc cgagctcgcg cgtccatgg 240
cgctcatggg ccaccccatc tgetacgccg agctcacga catgatgaaa gaggccgaca 300
ccgacggaga cggcgtcatc agcttcagg agttcacagc catcatgggc aagtccgccg 360
tcgacttctt atgcctcgct gctct 385

<210> 1331
<211> 380
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-023-Q1-E1-C11
<400> 1331

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ccgccgcgcg tcgtgccggc cccgttcgcg cgcgcctcg ccatcgtctt cgagctcttc 180
gtgggaaact cgacggccgc gttcgccgcg ccgcgcggct acgcgctggc cacgccgtg 240
gccggcctcc tcgcgtacga cgcgtcggcg gggcccgcgc cgcgcgtctc gctccgggcg 300
ctcggcgcgc cggcgcgcgt cgagttcaag gacgacctgt cggcggcggc gggctctggac 360
aagggggctg agttcgacgc 380

<210> 1332
 <211> 376
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-023-Q1-E1-C3

<400> 1332

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tgacgataac acggacaatg tgccaaggcc tgctgcttcc actactggcg gcggcgctcg 180
cagcgacggc gcatttcacg gtcggcgatg tggatgagta cgtgtccaag cgcacgcagg 240
agtcccgcc caggaacaac ggtggcgcg gcatcgatga cctcatctcc agtgcggcgc 300
gcttccacgc caacgtggat gcacgcgcct atggccgctg atccgacctg cangangaag 360
caacagctac cgtaat 376
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<210> 1333
 <211> 366
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C4

<400> 1333

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gccgctggaa aaagcgggtc ccggccggct gaagcaattc agggccatga accaattcaa 120
gaaggctgca ctgcggttca tcgcggggtg cctgtcagaa gacgacatcc gtgggctcaa 180
ggagatgttc aagagcatgg actccgacag cagcggcacc atcaccgtgg actagctgcc 240
gacacggctg gccacaagg tcaccaagct gatcgatgcc gaactccagc agctcatoga 300
agctgcctac tccaacggga acgggacgat cgactacgag gagttcatca ctgccacgat 360
gcacat 366
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<210> 1334
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B5

<400> 1334

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ccaatcccct gaggtctggc gggcgctggg tacaccacag ctaaggttaag ttcaccgccg 180
ggccgtggaa acacgcccac gcgaccttct accgtggggc ggacgggtcc ggcatcacgg 240
ctggctcttg cggctacaag gatactcgca cgcaggggta tggcgtgcac actgtggccg 300
tcagcacggg gctgtacggg gacggcacgg catgcagatg gtgctacgac gtatgctgcg 360
tgaacagccc tagcgggtgc aagcccaccg gagca 395

<210> 1335

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A3

<400> 1335

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taacaaccct tccaaaaaag taccacttct ccgtgaggcc tgagcccctc gccgcggtga 120
gccaagccgg cgacgctgc cccggggctc acgctcacca ccgagcccca accaattaat 180
aatatatata tatagctagg atcgatcgtc agtaaaatgg caggctccgc cgtcctgagg 240
agccccctgt ccgtctcct ctacatcctc gccgcggtgc ccgccaccgc cgcggcgacg 300
ccgaccgacg ccgccatcga cgaggcgtac gcgcacatcg tcaacctcac cgtaaccag 360
gag 363

<210> 1336

<211> 465

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A4

<400> 1336

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tcaaggggct tgtcatggca tccaaactta tcctcaagga attaaaggac ttgcaaaagg 120
 accctccaac atcatgcatt gcaggtcctg ctgggtgagga tatgttccac tggcaggcaa 180
 ccatcatggg tctcctgat agtccatatg ctggaggtgt tttcttggtg aacattcatt 240
 tcccgccaga ctaccccttc aagcctccaa aggtatcttt taagacgaag gtcttccatc 300
 caaacatcaa tagtaatgga agcatatgtc ttgacattct taaggagcag tggagccctg 360
 ctttgacaat ctctaagggt ttgctttcta tctgtccct gcttactgat tccaaccag 420
 acgaccctct tgtccctgaa attgctcaaa tgtacaagac ggatc 465

<210> 1337
 <211> 67
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B4

<400> 1337

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 gcccggc 67

<210> 1338
 <211> 280
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H12

<400> 1338

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 ctttgcatgg agcttagcac ttgtgtcgat gatctcagcg atgatccgtc cgacacgcag 180
 cacgatacct ccgatgtgtt ctaggagctg cctgaagtgg agctatgctc acagaatcgt 240
 catcagcagt atacggcggt ccatggtcca gtctgacatc 280

<210> 1339
 <211> 300
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H3

<400> 1339

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gagggcgctc ggcagggcgg cgacggggac gaccaggacg gcgccgctgc ggcgggcggc 120
ggtcgcgctt tcgttccctc gggcggtgcc ttgtccgtca cgtccacggc ctctgcgcgc 180
gactttcttct ctctgttttc ctcttgcctc tacattgtcc gtcgctcgct aatcattcct 240
ctgttttctt cccgctcttc tatctgtttc ttttaattctc ctctgctcatc gcttttctcg 300

<210> 1340

<211> 295

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H6

<400> 1340

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caccatccgt cgtcgccaa gctaccaatg agccaacgac atcaccaccg cccagcggga 120
atggggcaca acatgaggat tgctcgctgc gccttggtgg acctgctggt ggtggcgggc 180
gcgccgcccc tcgccaccgc gtacggctgc tacgaccact gctacgatcc ctgctccaac 240
gggagcagag acccctgcct gcatcaagat gtgcaaccag gcatgcggct ctact 295

<210> 1341

<211> 124

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-F12

<400> 1341

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tctgcacagc tctgtaccaa cattcacacg gcgagcgctc gacgctgttc aaaggcaatt 120
caga 124

<210> 1342

<211> 426

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-B9

<400> 1342

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 gccacatcag ccatgggcgc ctgcgcaacc aagcccaaga cgcttgaggg gcaggcccca 120
 gctgaggccg ccgtctccac acccaagggt gcgcccgagg ccactccaat ctccgttgag 180
 gttgcggctg atgaacaggt agctgagaag gtggtggtgg aggagccggc tgcggcgggc 240
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 gaccacaagg aggaggaagc cgtggagaag accgtcgtcg aggaggagaa gccagcggca 360
 gcagcccatg cagaggaaaa ggtcgccacc gccgccgaga ccacgacgac ggtggaggcg 420
 aagaag 426

<210> 1343
 <211> 401
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-A3

<400> 1343

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 tcgacgcatt cgccagcgcc accttcaacc agatcgactc cgcctaccgt gaggcgggag 180
 gggatccttt cgtggctgcc agtatcctgt cctccacgca ggacacgcac ccgccgcagc 240
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 ctgtcatccg ccgccatcaa cgccctctct ctagatccca tcatccgctg cgaatctccg 360
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<210> 1344
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-B11

<400> 1344

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gcgatgagag ccttgttcct cctggctctc ttctgcatcg tgcattggtga gaaggaagag 120
tcaaagggca tcgatgcgaa agcgtccggg cctggtgggt ccttcgacat caccaagttg 180
ggcgccctccg gcaatggcaa gacagacagc acgaaggctg tgcaggaggc atgggcatcg 240
gcgtgcgccc gcactgggaa gcagacaatc ctcatacca agggcgactt ccttgtcgga 300
caactcaact ttacaggccc ttgcaagggc gacgtgacca tccagggtga tggcaatctg 360
ctggcgacca cggacctaag ccagtacaag gaccatggta attggatcga gattctacgc 420
gtggat 426

<210> 1345

<211> 269

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-021-Q1-E1-H8

<400> 1345

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gtggacatgc tcccatgtac atggaaacct ggcaggcccg aactgggggc tgttgctggg 180
cgagagcgct gggatggcgg ctaccaggcc gtgggagaac cagaccatgc caccgccggc 240
cactggccgc gcagcatcca aaagcgcta 269

<210> 1346

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-A1

<400> 1346

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ttcttactag gcgacttttg gttctagtta tattccagga cctgccggag aggatcaagc 120
tgctgcagga agagatcggg cagtagcagg aggaggcgcc gggcatgctc agcgttttcc 180

gggacctcaa ccccgacgag atggtggcca ggaacacccc aagtccgacg tgggtgcggaa 240
 ggagggcggc gacaccggg tggagatcta ctgtgccgcg tgcacttcaa cggatgatggc 300
 tcgtgggatg tgattaggga tggtaatgga attgtctctt cacaatttct ttgagccctt 360
 aattaatttt agttcaaaaa tgaatagaaa tagaacctg 399

<210> 1347
 <211> 422
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-022-Q1-E1-A11
 <400> 1347

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 atgacggcca tgggctacgt gccgtacctg tgcgggctca actacacgga cgacaagggtg 120
 agcacgatca tctaccggga gccgccggtg tcgtgcgcca agctgtcaag gctcgaacag 180
 gacgacctca actaccgctc catcacgctc atctcaacc agccgccctt caccgcgacg 240
 gccaacgct ccgtcacgaa cgtcggcgcg gccagctcga cgtacaccgt ggaggtgaac 300
 gtgccggcgt cggtgacagt ggaggtgaac ccgccgaagc tgactttcaa ggcgctggaa 360
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<210> 1348
 <211> 415
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-021-Q1-E1-F4
 <400> 1348

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 ccgcaaacgg caaattaacc aatggcccct tggcaaacaa acccaaaaac ccttaagggg 120
 aaggccaac ttaaggccgc gttttcaaaa ccaaagggtc cccccaaggc aatccaaacc 180
 ccctttaagg ttccggctaa taaacaggta cctaaaaagg tggtgttgga gaaccgggtt 240

gcggcgcccg acgttgagca tcagaaagct aatgaggtgg tcgctccaga agcggccgtc 300
gccgagcccg atcacaanga ngaggaagcc gtggagaaga ccgtcgtcga agangagaag 360
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<210> 1349
<211> 414
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-021-Q1-E1-E4
<400> 1349

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gctacttcct gacgcacttc accgacacgg tcagcaacct acaggacgcc aacatcaccg 120
tgtttgctcg cgtactcaag aacgagttca tgaacctcgg cttegactac ttcgctgacn 180
cgacggtcga gatcgctacc tacacgttgg cagtgtctggc tgatgggctc gtcacggaca 240
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gctacacgat cctgcctgca caacctggcg ctctgggtcaa cctggcatcn ccgggggggc 360
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<210> 1350
<211> 325
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-021-Q1-E1-D11
<400> 1350

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atcgaggtcc tgaccgtacg gacgacctcc acaagcggag gatccgcgcg gtcgtggtg 120
atatgcatca cgacactgtc cgccaacctg tgaaacataa cggaggcgaa gcacaccagc 180
acgtacaagg tgggtggacgc ggtgacggtg ctaaagatgc aggtggacgt ctgcacgaag 240
ctcttttagg ccgcgcaggg gatcgccatg gacgaggtca atgcggcctc cacgctcgac 300
gagcagtcgg cgctgaagct ctgca 325

<210> 1351
<211> 352
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-021-Q1-E1-A3

<400> 1351

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tgctgccctc ctccctggcg tccccccgcg cggagaagac ttcccccgga ggcnagatgcg 120
gacgctacag ctggttggaa gccgatggcg gacgcagcgg cggcggctac tccaccccgga 180
gcgatgcagc gccatccaca cctgccgctg gggagactac gaccccttcg tcatgcggcg 240
gttactccac ccctagcgag gcagcgccat ccacgcctgc cgctgaggag acgacgacga 300
ctccttcgtc aggcggcgga ggttacggcg gtgcaaccgg caaagcttcc tc 352

<210> 1352
<211> 434
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-020-Q1-E1-G12

<400> 1352

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aggcagaggc ttcttagggc caatcttacc agtcgggtcc caaggcagca tgatctttac 180
cttgatgccc agcacaccct gtctgagcag cacatggcgc acggcgggtg ccacatagta 240
gttaacaggg tccccactgt ggatcatgag gccatccaca aacttcatgg atttagccct 300
ctgtcctcga agtttcccag acaccacgac ctcgcagcct ttggccccac tctccatgat 360
gaaccgcagc acaccatagc aggcctccg cacagcaagg cctcctanga gtttgtaacg 420
cagagactct gcct 434

<210> 1353
<211> 355
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-G9

<400> 1353

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ccccaggggtg gggattgagg ggcccagaag ggctgcctgc cctgggtcag gcagggtcac 180
cttgggaagg ctcggaagca caaatgagtg ctgggcttgc tgctgtgcca agggtcatat 240
gtgactgccg ctgttgacct gcgctgcgtc acagtggagg ggtttgggccc tgtgcttctc 300
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<210> 1354

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-020-Q1-E1-H12

<400> 1354

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actgttagct gcgttacacc ctttttcttg acanaacctt acttgcgag aaaacgagat 120
gagattggca tggctttatt tgtttttttt tttgtctttt ttgatttttt ttttttttgg 180
cgcttgactc aggatttaaa aactggaacg gtgaagggtga cagcagtcgg ttggatcgag 240
cattcccaaa gttctacagt gtggccgagg acttgattgt acatggtttt gttttttttt 300
taatagtcac tccaaatata gcgaaatgca ttgttacagg aagtcctttg ctttcccaaa 360
agccaccccg cttctctcta aggagaaggg gccagtcctc gcccaggtcc acac 414

<210> 1355

<211> 347

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-H4

<400> 1355

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 ccggagcatg ttgtattttc ttaagatgct ggaactaaga cggcttagtt gaattttcac 180
 tatcaagtga gtctcgggtc tgccccaaaa agaatgtttt gtacctcttc tgtcccaatt 240
 tatacgacaa tttataattc gtaaaaaaaaa aagtgaccga aacaaaaagc aaaaatcaaa 300
 gaaccataac agaaagaaga agaaagaggg ggatccgccca ggagttc 347

<210> 1356
 <211> 330
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-G11

<400> 1356

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 gctactagat gaggtataat acttaataca ctgtagatgc aagggtctata gttgtaatta 180
 caatgtaaat gctatgtaaa tagttgctga atgtgtagga tgttcaagtg tttgcatgtt 240
 ggtacttgac tgaacttttt ttcttctttc gaaaggatgt caaccattg gttggctgaa 300
 tccgtgaatg tggaactcat tgagtcgagt 330

<210> 1357
 <211> 454
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-F10

<400> 1357

gcatgatccc taccgccatg ggcgcgggat acgggagagg gctgttcccc tctccccag 60
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 gagggctccg tgcaggggtg atccttatca cttgaagtcc tctctggcca gagtccctca 180
 ccttcccaca gcccttgcta atgattacca taaaagctgc ctccggcctg gccttctagc 240
 ctcagcccag tcaaaagtcc cacctttacc atttgatttg gtgtgtgccc ttagagggaa 300
 ttcagagctc cgttaggctc atagaggggc ccagaccaa gatatggagg gaggggtccc 360

atatcagcaa acacctcaag tttcctgcac tgtgactgca ttttaagaagc aaagctttgt 420
caggtctacc agagcagctg ataagcctgc agaa 454

<210> 1358
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-F11

<400> 1358

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agcagctgac ttctgacaac agtcctttgt cttgaggcgg tgagtatctt ctgtgtttat 120
tatgccagga tttcactgct gactatagat tcttcccaga ctgaggggct gaagatcgat 180
catgtttcaa agagttcttt gaactgggct gtaggctaga gcagagatgt tttctttttc 240
tgatcataaa tacttcaggt tcacaaacta cttcttcata atgccaaaac tggaatgttc 300
tgtagtgggg acattatagc agcatacaca aatgctagga tggaaacatt agtgctggag 360
atgtttgaca gagtgatttg cactacaaat gtaaaacaaa acacaggctt tgacaagaac 420
aaaggattat aaaaacatgc ctaaaaatc 449

<210> 1359
<211> 447
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-F12

<400> 1359

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gttgctgttg gccttcatca gctcctggaa tctagaaagc gcaagaggcc cattcagaag 120
gtagagatgg gaacctcgag tcaaaacgac gtcgacatga gctggattcc tcaggaaact 180
ctgaaccaga tcaataaagc ttcaccaaga aggttgccca ggaaacgggc acagaagaga 240
tcagtgggat ctgatgagta aatgttcctt tgtgcaacaa ttcggtcttt acttaaccgg 300
ccctaattgtt tttcggcctg atgggaatta gtgcagagaa gccatatcac catagaaggc 360
ggctactact tatgtgtgga ctgagcaatc cgagtctgtg gcgatcatat tgctgaaaat 420

gcactgcatt tatttttcta aagtaac

447

<210> 1360

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-F9

<400> 1360

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ggggatatgtc ctgaggctgt gagctttggg tcccatgcag ctgggggagt ccatacaaac 120
ctggaagtaa accgtgtctg gtttgaacc ttcgcttccg tgaatagaga ggggtggatta 180
aatgggtccc aggaagccct ctgcgattgt tgctcagtca ctcagttgca tccagctctt 240
tgccggtcca tggactgcag cacaccaggt ttcttggtcc ttcaccgtct cctggagctg 300
gctcaaactc aggtccattg agttggtgat gccatccagt catctagtcc tctgtcatcc 360
ccttctgcct 370

<210> 1361

<211> 292

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-G10

<400> 1361

aaccaggggc ctccaagtga aagctcttcc tgctcccact gtcccccagc cctgtcccaa 60
catggcatat gtgggaaagc ggcaggcctg aagcaaacga tgttctggct gtggtaagca 120
gtgtcacagc atccctagtc agtgatcaca gagtcacctg ggttaaaagt ctaggtctca 180
cagtcaaggc aaggattatg aaggtgacac ggcaaagggt gtctgaaggt gtcataaatt 240
ttctcaaatt cagtggggaa gggaagggtg gaatgatgtc cttcaaggcc ac 292

<210> 1362

<211> 442

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-E12

<400> 1362

gcataatccc taccgccatg gccgcgggat acatggatat agctatttat ttctatctac 60
tagaaaataa agtcatatTT tttcttaatt taatattggt cattgctaata cagaacacac 120
tattgccagg aacacagtag ttattgttaa aatcagctgc actagatata atttgaaaat 180
atccagcacc aggttaattc caataacgaa cccaatagat tagttaatgc tatgagaaga 240
ctaaagagaa agagaaaaga gacgcagacc caggcctggc tccacatgct actaactacc 300
agctctcaga tgtgtcactg ggaacaatac aactccatg cgttttgcta catctccaga 360
agaggtaagg acttgagtcc acacggggat gctcgcttgc aagtccttga ggccacagc 420
ctggtgtgtt tcacgcacag at 442

<210> 1363

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-B12

<400> 1363

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cctggagcca aaaggcgact actgttcctc cccggagcca ttccaggtag ggaggagagg 120
gggtttcaga cttgtgttcc tctccctcgt cctcctgtct ccttaggctc agtagaagcg 180
gtggggaccc tctaccagct tcctgagccc tgctgcagt tggccacca gcaactgattg 240
gggacaaggg ctgaactgct ggccaccagc cacacctagg aaggagctgg ggcctagaag 300
ctaggcagcc ttcggcctca ggggccgctt cgtgccctcc cagctgggag gggtcgctgt 360
ttcgcttgt ctgtc 375

<210> 1364

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-C10

<400> 1364

gcatgatccc gaccgccatg gccgcgggat accaaaagac cttcctcctg atactgcgt 60

gctggacctg caaaacaaca aaataactga gatcaaagat ggagacttta agaacctgaa 120
gaaccttcac acactgattc tcatacaaca caaaattagc aaaatcagcc ctgggggcatt 180
tgctcctttg gtgaaattgg aacgacttta tctttccaag aatcaactga aggaattgcc 240
agagaaaatg cccaaaactc ttcaggagct gcgtgtccat gagaacgaga tcaccaaagt 300
gcgaaagtct gtgttcaatg gattgaacca gatgatcgtc gtagaacttg gcaccaaccc 360
gctgaagagc tcaggcattg aaaatggagc ctttcaggga atgaagaagc tctcctacat 420
ccgcattgct gacacaaata taactaccat cctcaaggt 460

<210> 1365
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-B10

<400> 1365

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accaggactg gactggagga aaggagttca agtgcaaggt caacaacaaa ggcctctcgg 120
cccccatcgt gaggatcatc tccaggagca aagggccggc ccgggagccg caggtgtatg 180
tcttggaacc acccaaggaa gagctcagca aaagcacgct cagcgtcacc tgcattggtca 240
ccggcttcta ccagaagat gtagccgtgg agtggcagag aaaccggcag actgagtcgg 300
aggacaagta catttctaatt ttgtaacata caaccatagt ctgcaaaact attctgtgta 360
tactgacgc acatcccaaa ctgtttagtt ccagtc 396

<210> 1366
<211> 276
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H12

<400> 1366

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tcgagtactt gcacgaggta accaaccgac cagtgatcta ccgcgatctc aagggatcca 120
acatcctctt gggcgcaagc ttcaacgcga agctgtcaga cttctgtctg ggcaagcttg 180

gtccgagccg cgacagaacc catgtcatca caaaggggat tgggacctac tgggtactgcg 240
ctccagaatt agccatgact gggaagctga ccaaga 276

<210> 1367
<211> 455
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-A10

<400> 1367

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ccttttgttc ccacaaatat ctttcttact ttgcacaatt tataacttggc ctcttcaggt 120
gtaatacgat gaacagcaaa gcgacccttg gtgtcataga tcaaacgaaa gttctctcca 180
gtcttatcaa tgctgatgac atccataaaa ccagcagggt aggttatatc tgtgcggact 240
ttgccatcga tcttaatgaa acgctgcatg caaatcttct ttacttcac cccagttagg 300
gcatacttaa gtctattcct taggaaaatg attaggggga gacactccct tagcttgtgg 360
gggccggtag atggacgagg ggcaaacacg ccggtcagtt tatccagcat ccaatgtttt 420
ggacctgcta ctgtctcag gtacaaaatg gcac 455

<210> 1368
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-020-Q1-E1-A12

<400> 1368

gccatgggag cgggatactt taaccatggc aggtcgggtga tgaacttgac cccagtgtgt 60
tttatagaag ctctgcgacc ttgtcatgtg acatgtggaa gcagtctgaa ctgttcaggt 120
ccatcagctt agctcatttc aggtgagcca gcagccatac cttgggtccc ctgagaaggt 180
cagtcagaga ctttgggtca aagttcctac ctttctgaac attctttttt tcccaaggac 240
attcacaaat agctacttga atgtatgatc atgttcaccc agtccaggca gaaatgggga 300
cgccgttggc agggagtatt ctgactccct ttccgtggct gcaagtggtc tccagaaata 360
aagggcatgg cctggacagc gttcaatcaa ctctggggg caaaggacaa actgccccaa 420

<210> 1369
 <211> 277
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-020-Q1-E1-A4

 <400> 1369

 ccaaggccga tcattttttt tgactttgtg catgtatatc cgttcgcagc ctatacacat 60
 gttacatcta agtttactac aggtagggat atatgaatcc ttgaaatata atgtaccata 120
 cctcaagtag aatgccatga tatcaggcat cctgtttcca cgcataatac atgaggatta 180
 cgtggacgat tctgatgcta catacacata cgtagctaca caagacgggc taatcaaatt 240
 caccatcat caatcaacct aagaacggca tttcatt 277

<210> 1370
 <211> 446
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-020-Q1-E1-A5

 <400> 1370

 cccaaacgtc cgcttcaccg agccccagat caagtgttac atgcgacagc tgctggaggg 60
 gctggcgcac tgccatgcgc gcggggtgat gcaccgggac atcaagtgcg ccaacctgct 120
 ggtgaacaac agcggcgagc tcaaggtggc ggacttcggg ctggcgaacc tcttcgcgcc 180
 ggcgccggcg gcgcgctca ccagccgggt ggtaacgctc tggtaaccgc cgccggagct 240
 gtccttgggc gccacggcgt acgagccctc cgtcgacctc tggagcgccg gctgcgtctt 300
 cgcggagatg caacgcgcgc ggcccgctct gcagggccgc accgaggtcg agcagatcaa 360
 aagatcttca agccccggtg gccaccgcc caaggacttc tggggccgct tggggctctc 420
 ccacggcgcc gtcttcgcc cgcagc 446

<210> 1371
 <211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-F9

<400> 1371

ttcacggggc cacgcacgcg tccgcatcag gcttggttac aatagcttgg gtgcgtttgc 60
caccatcaat cacctccact ttcaggcgta ctacttgta gtgcctttcc ctgttgagaa 120
ggcagctacc cacaagatcc cactctctga ggacacgaag aagaatgggg tgaccgtgtc 180
caagctgata aattatcctg tgagaggcct ggtatttgag ggaggggaaca ccctggacga 240
cctggccact gtggtttcta atgcttgcat ttggctgcaa gacaacaatg tgccttacia 300
tgtgtcatt tctgactgtg gcaagagggt tttctgttc cccagtgct acgcagagaa 360
gcaggctctg ggtgaagtga gccaggagct gctggacact c 401

<210> 1372

<211> 236

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G1

<400> 1372

ttgagtcgta ttagactcct ctctacggtc atcatggctg tgggtgtcgt ccttgtagcg 60
ctcgtccacg gcggtcatg cggggcccc aggtgtcgc ccggtccaa cagcagtacc 120
agctacaatc tggaaatggt tcacgggac cgccacctgc tacggtcagc ccaacggtgc 180
cggcgctcct gacaccggcg gtgcgtgctg tctcaagaac gtcaacctgt caccct 236

<210> 1373

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G11

<400> 1373

acaacaccct ataatgacgt cgtactaccg ccggccaaca actcagccgc cgcaaccgcc 60
acatcagcca tgggcgcctg cgcaaccaag cccaagacgc ttgaggggca ggccccagct 120
gaggccgccc tctccacacc caaggttgcg cccgaggcca ctccaatctc cgttgagggt 180
gaggctgatg aacaggtagc tgagaagggt gtggtggagg agccggctgc ggcggccgac 240
gttgagcatc agaaggctaa tgaggtgggt gctccagagg cggccgtcgc cgagccccgat 300

cacaaagagg aggaagccgt ggagaagacc gtcgt

335

<210> 1374

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G2

<400> 1374

cgtccggtcc tatctccatc ggccatctct ggcgcgatgat cgaaccgcac gaccgaggca 60
gcaagtgagt ctcagacacc accatgcagg cgatgcgtcc ggccgcggag ggggaggcac 120
aggagcaggc ggtgagggcg gaggcggacg aggtgaagag ggaggtggcg aaggcgcacg 180
acgaggagga ggcggtgcct gaggagaaag acgtggcggg tgtaggggag gaggtggagg 240
cggaggcgga gacggagaca gagactgaag gcgaggcgga ggcagaggtc gaggccgagg 300
tggaggtcga ggtggaggcg gaggccggtg catcgtctgc gaagaagaac cgtatccagg 360
tgtccaccaa caagaagccg ctctatttc 389

<210> 1375

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G4

<400> 1375

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gagctacaag caaccgaccc gagcgaaatg agcatggaca tcgtcaagtc gcgagccctc 120
tgaaacagcc ccggccgctg cacctgcacg ctgcaggggc gcatcggctc ctgcatgccc 180
gtgggtcgtc gaatccttgc ttgtgtgttg ggaacggctc tgtgttttcg tgtccttgtt 240
ttcctggaag caaaagccct gcattctgta tgagactgta tgccattttc catctttttc 300
tctccccata tctctgccct agtcctgcta ccgctgtaga ctagaactta tttggtgttt 360
gatctcgtgg cattgtcgag tcttttatgt gtctatgcaa tgcta 405

<210> 1376

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H10

<400> 1376

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atctcacgct ctctctctct tcctccgctc cgtcgggtcg gcgtcgccat cgccggccat 120

gggttgcggt ggctccaagg aggcctggc caccggcaac accagcgccg gcagcaaggt 180

cctccggagg aagccctcct ccgtctccac cggcgcaagc cacacatcca ccacgtcgcc 240

gtcgtcctcc ggcgtcgctc tcaaggacgt cgtgaaggat gcggcggcgg ccggcgaggt 300

gatgacgccc gccgacgccg agaagcctat ctctgtcgac cccaaggag acgccatcgt 360

ggtgatgggc gccaaagaaag aaggggg 387

<210> 1377

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E12

<400> 1377

tacaagactc tatacagacg tcgtagtata gtgcatggtg agaaggaaga gtcaaagggc 60

atcgatgcga aagcgtccgg gcctgggtggg tccttcgaca tcaccaagtt gggcgccctcc 120

ggcaatggca agacagacag cacgaaggct gtgcaggagg catgggcatc ggcgtgcggc 180

ggcactggga agcagacaat cctcataccc aaggcgact tccttgctcg acaactcaac 240

ttcacaggcc cttgcaaggg cgacgtgacc atccagggtg atggcaatct gctggcgacc 300

acggaccta ggcagtacaa ggaacatggt aattggatcg agattctacg cgtggataac 360

ctggtcatca ccggcaaagg aaaccttgac gggcaaggcc ca 402

<210> 1378

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F10

<400> 1378

ttcacgggtg cacgcacgcg tccgcacgtc tcaccctccc tccctcacac aaataataag 60
gaaagggtccc gcccttttcc tccgacatcc acagggggga ggggaaaaca cgtgcattca 120
cccggcggca ataatggcct cggttccggc tccggcgacg acgaccgccg ccgtaatcct 180
atgcctatgc gtcgtcctct cctgtgccgc ggctgacgac cccaacctcc ccgactacgt 240
catccagggc cgcgtgtact ggcacacctg ccgcgccggg ttcgtgacca acgtcaccga 300
gtacatcgcg ggcgccaagg tgaggctgga gtgcaggcac ttcggcacccg gcaagctcga 360
gcgcgccatc gacgggggtca ccgacgcgac cgggacctac acg 403

<210> 1379
<211> 334
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-019-Q1-E1-F3

<400> 1379
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ttggcgtcgg tgacgactgc atctccatcg gccccgggac ctccaagggtg aacatcaccg 120
gcgtgacctg cggccctggc cacggcatca gcatcggcag cctanggcgg tacaaggacg 180
agaaggacgt cacggacatc aacgtcaagg attgcactct taagaagacg atgttcggcg 240
tccgcatcaa ggcgtacgag gacgccgcct ccgtgctcac cgtctccaag atccactacg 300
agaatatcaa gatggaggac tcagccaacc ccat 334

<210> 1380
<211> 400
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-019-Q1-E1-F4
<400> 1380

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aaaacatgca accctaaaaa ttacggaccc aaaggaaacg gccctcaggg acctttaaac 120
cttaagggtat agtggaagt ttggaactac tgagcccact cttctgctgg atatcttgat 180
ggctgccgac aaatttgagg ttgtttcatg catgaggtag tgcagccagt tgctcacaag 240

cttgccgatg accacagaat ctgcacttct ctacctagat ctcccttgct caatttcaat 300
 ggcagcagca gttcaacctc tgacagatgc agctaaggat ttccttgctg taaaatacaa 360
 ggatttgact aagttccaag atgaagtgat gaacattcct 400

<210> 1381
 <211> 403
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-019-Q1-E1-E1
 <400> 1381

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 gcatggagcc acgggcattc cccaccccaa ccgcggcatc tgccagtctg cgacactgcc 180
 gccccagcag tggggcaaac actgtcgtcg gcgccttgga gctttggatt ggctgggagc 240
 gcgaccggcc tctgtctcca ggctgcgagg cagcagcaac ctccctcgct ggctgatgac 300
 cgtcttcgcc gcggatccaa ctcccaacgt ggtcggttg cttcccgctg tcaccattgt 360
 gaggtcacga ggatttgaag aatcacctcg gtaactggga tct 403

<210> 1382
 <211> 397
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-019-Q1-E1-C3
 <400> 1382

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 ttctcaacat tgtaacagga gtctttgctc gcaggggcta caatatacag agccttgctg 120
 ttggctcagc tgagaaggaa ggcatttcac gtattacaac agttgttcct ggtactgttg 180
 aatccattgg gaagttagtt cagcagcttt acaagcttat tgatgtgcat gaagttcatg 240
 acattacca ctacctttt gctgaaaggg agctgatgct tattaaagtt tctgtaaaca 300
 ctgctgctcg gagggaaatt ctagatattg ctgaaatctt ccgagcaaaa cctattgacg 360
 tttctgacca tacagtaacc cttcagctta ctggaga 397

<210> 1383
 <211> 309
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C9

<400> 1383

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 gtcctacgcc cccgcgcgct aagacgacga aggcctcggt ttctcctcgt ggtctgacca 120
 tccaatccaa actcaaaaga acaaatacga aagaaacgta gtgaagggga acaaataaat 180
 gggatatatgt aatcttgaga tgcattgcct ctcaaaacac tgtactgggg ttctcaaaaa 240
 aaacattgtg atgggaggtta tatatataac ttatctcac catttattta caccaacaag 300
 tcattgggt 309

<210> 1384
 <211> 382
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D10

<400> 1384

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 aggtgccgct ggggcttctt ccacgtggtc aacaacgact acacgcactg gctcatgtac 120
 gccatcggcg gcagcaaggc cccaccatc atcagccagg gcaaccgcta catcgcgccg 180
 cccaaccttg ccgcgaagca ggtcaccaag cagcatgaca cgccggagtc cgtgtggaag 240
 aactgggtgt ggcactccga gaacgacctt ttcatggagg gcgcctactt caccgtcacc 300
 ggcggccaga tcaacagaca gttcaacaag aaggacctca tcaagcccag gaacgggtcc 360
 tacgtcacca agctcacgcg ct 382

<210> 1385
 <211> 385
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D12

<400> 1385

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acggcgatgg aggcgagagc ggccatgagc tgggtactgcg gctcccttct ggccgtggcc 180

atcgcgctgt tctgttccgt gtccctcggc gtgcgcgcgcg ccggcgccgg cgccggcgtc 240

gacatcaagg tgtcgtgtgc agcgacgccg gaccgggacg tgtgcctgcg cgcgctccag 300

gcgacagcg actccaagac cccgcgggac ctggcggaag cggcgctccg cgcgcgacg 360

accgcgggcg gcgcggcggg cgact 385

<210> 1386

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D7

<400> 1386

tacacgcctc tacactgagt ctgataaacc gacttcatgc gcgcgttccg cgaacatttc 60

gccgactacc tcggtaacac catcgtggac atccaagtcg gcatgggccc cgccggcaag 120

ctgctctacc cgtcctaccc ggagagcacc ggcacctgaa agttcccagg catcggcgcc 180

ttccagtgtc ccgtcaggtc gatgcgtagc cgcttgcaag cagtacctga agcggacgtt 240

caacctgagt ggggccacgg taggccaacc gacgctgggtg gctacaacaa ctggccggga 300

tacatagtct tcttccgcgg cgaaaaccgt ggggtggagca ccgattact 349

<210> 1387

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D8

<400> 1387

ctcgcgggtc gacacacgcc tctacacaca cgcttgcaa cgattcctct cctccgcccg 60

ttcccaccga tctcacgctc tctctctctt cctccgtcgc gtcgggtcgg cgtegccatc 120

gccggccatg ggttgcggtg gctccaagga ggccgtggcc accggcaaca ccagcgccgg 180

cagcaaggtc ctccggagga agccctcctc cgtctccacc ggcgcaagcc acacatccac 240
cacgtcgccg tcgtcctccg gcgtcgctgt caaggacgtc gtgaaggatg cggcgggcggc 300
cggcgagggtg atgacgcccc cgcacgccga gaagcctatc tctgtcgacc ccaaggcaga 360
cgccatcgtg gtgatggacg ccaagaaaga agaaggcaac aac 403

<210> 1388
<211> 381
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-019-Q1-E1-C11

<400> 1388

ggtccacgac gcgtccgcat cctattcccc cccgctaaaa cccaccaaac cgccgcgcgc 60
cgccggcggc gcaagggacc cacgatggcc atgcaggtgg tgcgcaacct cgacctggac 120
cggtagcggg ggcgggtggtg gtgaacgaga cgtggggcga cgggcgcgcg gccacatcg 180
aaggcacngc ctggcgcgcc gacctgcca ggcacgaggc caagctcaag gttcgcttct 240
acgtgccgcc ctctctcccc ctcatccccg tcaccggcga ctactgggtg ctccacatcg 300
acgccgacta ccagtacgag ctcgtcgggc agccctccag gaactacctc cggatccttt 360
gcangcagcc tcacatggac g 381

<210> 1389
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B12

<400> 1389

cacgcgtccg cacacgcgtc cgcgcgtcta ttgcgacacc tgccgcgcgc ggttcgtgac 60
caatgtcacc gagtacatcg cgggcgccaa ggtgaggctg gagtgcaagc acttcggcac 120
cggcaagctc gagcgtcca tcgacggggt gaccgacggg aacggcacgt acacgatcga 180
gctcaaggac agccacgagg aggacatctg cgaggtggtc ttggtggaga gcccgcgcaa 240
ggactgcgac caggtgcagg cggacagggg ccgcgccggc gtctgtctca ccaggaacgt 300

cggcacacagc gacaacctgc gccccgcaa cccgctcggc tacctcaagg acgtgccgct 360
gcccacatctgc gctcgcctgc tcaaacagtt ggactcggac gacgacgacg a 411

<210> 1390
<211> 382
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B3

<400> 1390

tggtagggct tgctagctag caaaaactgt tggtatggc ccccgtaac ccgccgaaa 60
tggtgttcgg cctcctcgcc cacaatcgcg gcgaaaggca gtccgccatg ggcgtcgccg 120
tcggctgtca aattcacagg tccggtcatg atgccaaggc tttcccgct tgctgtcct 180
ctcggaggcg cgtccacagg tcacggcggc ggacgggtgg gcggggtac ggtgcgagt 240
caacccgagt cagggtcggg tttcccgagc cgcgcgcct ctcgtctcg cgctccggtg 300
gatgatggag cgcgtcggcg tcggcgtcgt tggatccctc tctttgcgcg gctgcggatg 360
ggttgaggcg acagcgaccg aa 382

<210> 1391
<211> 347
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B9

<400> 1391

acgcgtccga aaagcattcg gaacaacaag accaagggtat tatgcaccaa cgcccaagg 60
aagaacaaag ggtggctcca aggggcttga agggtttaaa aacccccctg aatgggacca 120
ccccccccag taaaaatttt tccccgcct gtgaattgcc caaaaagggt gtccactggg 180
gagccccaca cattaacgcc aaaaaacccc cagccaaata agttctaccg ggggagaacc 240
cccaattttt ggggggaaaa ttaatttccc aaaaacaacc aaaatcaagg ggtgaaaaaa 300
caaaaaaaaa aagaaaaaaaa aaaggggggc gcccacaaag attcaaa 347

<210> 1392
<211> 409
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-H10

<400> 1392

taccggtacc tggactccgg acggacgcac gcgtacgccc acgcgtccgc aagccccgca 60

ccgccccgcc cgcgcccgcc tccgccccgc cgcattgagac ggggtcggca cggggcgatg 120

aggagcagcg aggccatgga gctcctgggc ttccctcgct actccaggcc ctccccttcc 180

gaggtgaagg ctgcgtatag aagaatggtg atggagtccc atcctgatcg tgtctcaacg 240

catctgaaat cgcacgctga gtcaacattc aaggagatag cagaagcata ttcatgtttg 300

aaggacggaa gaagatcagg gagtangatg gaacttcatg ttatgcgttc tgggtgttcaa 360

ctagccacgg aagatcaaat agaacgttgg gtacagcccc gtttctact 409

<210> 1393

<211> 281

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-H12

<400> 1393

ctttggcaac aacgaatact gaaagacctt ccaaactagc atgaagtgcg ggcaccttgc 60

ttttcttttg ctttcttttt gtgaaaacgt gtgcttagcg acaatgctgg caaagtgtta 120

gaagcatctc tggaatgctt cgtgtagtat cttttgactc tcttttcttt tgcgtctca 180

atcatgttac atgagaaatg cctgatggac tcaaataatg aaccggtgat tcaaaaacca 240

aaagcctctg atgaatctat ttgagggttt ggatcttgat c 281

<210> 1394

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F2

<400> 1394

acgcgcggga cgatgcaagc ctctacactg agtcgcatta ccatccctca actcgcgcgc 60

gcacggccgc atccgcggca cgcgcgccg catcccgctgc ccgcgcaaaa ccggatccgc 120

cgccgccatg gcggtggacc gcgtggacgg cgaggaggcg ttcgaggagg tggacccgac 180
 ggggcggttc gggcggtacg cggacgtgct ggggctcggg tccgtcaaga aggtgtaccg 240
 cgggttcgac caggaggagg g gatcgaggt ggcgtggaac cgtgtccggc tgcggtcgct 300
 ggccgaccgc gaccccgga tggaggagcg cctccacgcc gaggtgcgcc tcctccgctc 360
 gctcagccac gaccacatca tcggcttcca caaggtgtgg ctggaccgcg acgccggggt 420

<210> 1395
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F3

<400> 1395

actcgccggg cgatgcaagc ctctagagtg agtcttacta ggcgcgtccg agacgcacgc 60
 cggcgtggcc tacgaccact gcatggcgctc gctgggccc gaccccgca gcaaggacgc 120
 cggcaacaag aacatgcacg ggctggcggt gctggccacc aggatggcca tctaccacgc 180
 cgccagcacc gagtccaaga tcgacgacct cacggagctg gacgcggcgt cgtcgatcc 240
 gcaggetcgc gcccgcttca accactgcct gtagcagtag ggcggtgccg ccgacctcct 300
 ccgcgactcg ctggacaacc tcaaagcgaa tatctactgc atagccatgg agcatctgac 360
 cgccgcaatg ggcgcctccg agagctgcga agacgcgtcg aacggccagg aggaagatgt 420
 ccccgtcgcc gct 433

<210> 1396
 <211> 447
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F4

<400> 1396

acgcgcggga cgatgcaagc ctctacagtg agtcatgcga gagaaccgac ttgccaccgg 60
 ctgctcgccg tctctctctc tctccctcgg ggcgcgcgcg cgcgggagac aggccaaccg 120
 atcgccaggc cggcagccat gggcaagcac ggcaagtgc gccacgacgt ggaggcgtgc 180
 taccgcccgg gggcagcggg cggcggcaag taccgtaca tgacggagaa cccgcagctg 240

cgggtgggcct tcatccgcaa ggtgtacgtg atcgtgtgcc tgcagctgct gctgacggtg 300
 gccgtcgccg cgacgggtgaa cctgggtgccc gccatogggg acttcttcct ctcccgacc 360
 atgggcgcca tgttcgcat catccgggtc atcgtcgccc ccacccctgt gatgatcccg 420
 atgatcagtt accggaagcg gcaaccc 447

<210> 1397
 <211> 112
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-018-Q1-E1-C11
 <400> 1397

ctaagacata aggaactacg tatgtttatg gaactttctt taagccatat atttctcagc 60
 atgagaatga catcgaccga aatcgtcttg agctcagaac tcgaaccaac ga 112

<210> 1398
 <211> 98
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-017-Q1-E1-H9
 <400> 1398

cgggtccgata ctacgggtg gcacacgct cggaaataaa aaaaaaaaaa aaaaaaaaaa 60
 aaaaaaaaaa gggaggaagc aaaaaagaga aaaaaaca 98

<210> 1399
 <211> 456
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-018-Q1-E1-A11
 <400> 1399

taccgagtcc ggaagtcaca ggtgacgcac cctacagtaa aaggaactac gtatgtttat 60
 ggaactttct ttaagccata tatttctcag catgagaatg aaatcgaccg aaatcttctt 120
 gagctcagag ctgagccac cgatatgggt gtcctttact tccataaggc tgcttcggta 180
 gggcaaaata ctttctttga cgttttaaaa tatgttgctg cccagtcccc ttctcgaaa 240

tcaaggctgc accctcatca ggaaccacag cagcagcaac cacaagtgca ggtggagctg 300
cagcagcaac cacaagtgca tgtggagctg cagcagccgc aaccacaaaa acaagcagca 360
cctgttatgc gcagaggagc atctattgct ggtcggcaag cagcaatggg acagcagtct 420
ctggagacta taccggttcc atcttcaccc aagata 456

<210> 1400
<211> 483
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G11

<400> 1400

ggtcgccgca cgcgtccgca taaaaacat ccttaaaacc caaaacatca cctccatctc 60
gctaaggctc aggttctcaa agagcagctg ctgtagctgc tctatcctct gttgctgact 120
gctgagcaat ctggatcttc agaatttcta cgatccaaag ctagcaacac agcatataag 180
actgatgtcg accggattgt cataactcca gctggcccat caggcccatc ttctcctcag 240
tctgaagctg gggagtccaa tgtgtttcac caggaaaaag atgctgcagc agatggggca 300
ccgcctgaca ctgatggagc agtggctgag gccggagagg aagaaacaac ggaaaatggt 360
ggtgaagcga catttagcta tgaccgcttg atatccaaat ccaccgattc agttcgtggg 420
atagattaca aacgcagaga ggcatactta tcagatagtg aattccaaac tgtttttggc 480
atg 483

<210> 1401
<211> 352
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G12

<400> 1401

cccagtcagg atcctcctaa tcccgggtccc gttccaccaa ccccgccccg gagaacaaac 60
aacttggggc ccaccggaga acgggtcaac aaaggccaac caagggttga agcccgaag 120
tatcgacgcc ggcaaggcct tgggcccgcc cgcgggcgtg ctcatcaacg gcaagggcgg 180
caaggacctg taggccgcgc ctgccttcac cttcgaggcc ggcaagacgt accgcctccg 240

cgtctgcaac accgggatca acgcgtcgct caaacttccg catccaaggc cactacatta 300
aactgggtcca actggaaggc tcccacaacc tgcagaacac gttcgactcc ct 352

<210> 1402
<211> 236
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H10

<400> 1402

aaacactgtc aaacaaaaat aattttacca aggaaaacgg aaacggaacc aagaaggaca 60
acaacaacaa taacatctta accgttgaat tgccccaag gttctctcca accccaaacc 120
tgtcttcac aataaagggc cccgcttcac tgggaaacca aaccctacc gtacgtgcct 180
tcggaagggt aaagcgacag gcagaactaa ctacaccggc aaaaccaacg agcatc 236

<210> 1403
<211> 425
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-017-Q1-E1-H12

<400> 1403

tcgccaagc cttcgccgac gccttgcccc gggcctcccc ttccgcaac aacaaattca 60
accaagcaac caaaatgttc ccccttaaaa ctgccggggc cctttaaaat cccgccttt 120
gcggccctaa ccccgcccaa ggccccggaa aattcaccga aggaaggcag tgctgcaaag 180
gcacctgagg ctgcaaagag aactgctgcc cccgctgaag caccgggagc cgcgtccacc 240
cccgctgccg ccgctggccc atcatcgctg tctaggaagt ctggtccagc taccgcgcca 300
gccaccgct ctacacccc ttcttccacn gacgaggagt tgagcccttc cccgccagca 360
tccaccgccg cggcgctccc tgcggctgan ggaacggctg ctgatgactc cgcgggtgctg 420
ctgcc 425

<210> 1404
<211> 402
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G10

<400> 1404

gggtccacca cgcgtccgac agcgcacggg gacagcccca acacggacgg catccacatg 60
ggcgactcgt ccgggggtcac catcaccaac accgtcatcg gcgtcggcga cgactgcac 120
tccatcggcc ccgggacctc caaggtgaac atcaccggcg tgacctgcgg ccccggccac 180
ggcatcagca tcggcagcct aaggcggtag aaggacgaga aggacgtcac ggatatcaac 240
gtcaaggact gcacgcttaa gaagacggcc aatggcgtcc gcatcaaggc atatgaggac 300
gctgcctccg tgctcaccgc ctccaagatc cactatgaga atatcaagat ggaggactcc 360
gggctacca tcatcatcga catgaagtac tgccccaaca ag 402

<210> 1405

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G1

<400> 1405

gcgggtcgac acaagcctct agagtgagtc gactaagca accagcttgc tcgaccgcgc 60
ccgtcattct gcgacaccgc cgttccattc cgtcgcgccc tccaacggca ctccggcagt 120
cagggatgga gatgaagaag atcaccggcc ccgtcctcgt gccaccgcgc gaggtcaccg 180
gtaccacgc cgccagaagc gccaatccga gcctcatgac ctggaccgcc atcgtcacga 240
tcgtcgtctg cgctccctc tcgaccgacg tctgctacat ctgcttctag tacatgcagt 300
caacggcatg ctgcgacgcg tggcccaagc tcaaagcagc gtgacagata 350

<210> 1406

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E11

<400> 1406

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acaagggcgt ctgcaatttg tgattctaaa accaatcctg ggcgttaaca ctttcatact 120
 ttacgcaaaa gggaaatatg aagatggaaa cttcagtgtc aaccagtcct atctatacat 180
 aactatcatc tatacaatct cataactctac ggcattgttt gctcttgacac tgttctatgc 240
 ggcatgcaga gatctacttc agccatataa ccctgtcccg aagtttatca taatcaaadc 300
 agttgtgttt ccaacgtatt ggcaagggtg gctgggtttc cctgctgcaa aatctgggtt 360
 cataaaaaat gccgagaaag ctgcataatc ccagaacttc gtgctatgtg ttgagatgct 420
 catagcagcc attgggcacc gattttcctt ctcctac 457

<210> 1407

<211> 137

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E12

<400> 1407

gtttcacaat ttatccttcc ccacaggtgt caacagctgt tgtaaagcca tacaacagtgc 60
 tcctctcgac ccactccttg ctcgagcaca ctgatgttgc agtcctcctg gacaacgagg 120
 ctatctatga catatgc 137

<210> 1408

<211> 347

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-E2

<400> 1408

caacacccaa gaggtagtgc gattagtggc gatgaggtcg tccgtggccc gcttgattcg 60
 ctctctctct gctcgcctt cactctcag tggaaatgca ttcttcggca atgccagacc 120
 cagtgatcag aggcacattg agaagccttt taaagtgaag gaggcagaac ctgtgaatgt 180
 gacaaaacct tcaccacaca agctgctggt tctaggagga agtggtttcg ttggatcaca 240
 cgtttgcaaa gaggttttgg acaaaggtct aggtgtctct agtcgtaata gatcgggaaa 300
 gccatcctta aatgaacctt gggtgacaa agttatatgg aaccaag 347

<210> 1409

<211> 467
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-017-Q1-E1-C10

 <400> 1409

 gcgtctgctc aaccacccgc cgccgatgga tgtggatttg gacgaggcca ccgccacccc 60
 ggccctcgcc tctgcaaagc ccgcttccaa cggcgaggcc ccctccggcg cccgcgaggt 120
 ggatgtcggc gaggagtaca cgctcgccgg cgttctgcgc agcttcgtcg acggcgtctg 180
 gtacccggac gagccgctgc tccggcggct ccggcgggcg tccctggaag gcgcgccgcg 240
 gctgaagggg gcgtctcgga actcagcgcg ggatctgctc gagtgggcaa ggcaaggcag 300
 cggcctccgc gccatcctcg tcatctcggt ccggacaatc atgcctatan cattgactgg 360
 ccttttaatc ttcattgttct ttctgctaata tgccactgcc aatgcgatca tegtctcagc 420
 cctgatgtca ctggccgctg ctggcggatt cttggctatc ttctttg 467

<210> 1410
 <211> 313
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-017-Q1-E1-C11

 <400> 1410

 gaagagagcg gcggagagcg gcgaagcggc cgaggcgaag aagattcagg acgacttctg 60
 ctcgacgctg tgcgaaggca agaaggggac ggacctggtc gtgtgcaaag agtcctgcgc 120
 gctctcccag cagtccaacc tgggtgctgta cggcaggatt cagtgcgaagg gcaaatacac 180
 cgagcagaag ggcatacagg cgccgggcat gaaggtctgc caagaggagt gcgacaaggc 240
 gtacgtggtg aaggcggcgg aagtcaccaa ggctgcagc gtcacctgcg ccaaggagaa 300
 gaacccgcgc ctc 313

<210> 1411
 <211> 246
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-A12

<400> 1411

ccggttgcac ccaccaaagt gtggatattg gatattgaaa agttgggggtc acaatttttg 60
ttcccatagt cgtcacgatt agccatctgt caaagtactc cctctcttcg ttgaataagg 120
tctattgtca tttttatcac aactgcggt atttagatga ataatacaca agcatttgag 180
gattcaaata gaccaatcct gtgcaaagt tctgtactctg agaatatagc accagagtgn 240
tacatc 246

<210> 1412

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B11

<400> 1412

cccgcccttt cactgccctc ccctcaacaa cattaagggtc cccccctttc cgacattcac 60
acgtgggaca ggaaatcacc ggccatggcc tcaattccgg cgacgacctt cgccgtcatc 120
ttatccgtcc ttttctgtgc cgcgggtggc accgccgtcg acaacgacct ccccgactac 180
gtcatctact gccggtcta ttgcgacacc tgtcgcgcgc ggttcgtgac caatgtcacc 240
gagtacatcg cgggcgccaa ggtgacgctg cactgcaaac acttcggcat ccggaacctc 300
gagcgctcca tcatacgggt gaccgactgg aactgcacgt acacgatcga gctcaaggac 360
agccacgatg acgacatctg cgacgtgggtc ttggaggaca gcccgcgcaa ggactgcgac 420
caggtgcatg cagacacgga ccgca 445

<210> 1413

<211> 185

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-B12

<400> 1413

gcgtccgcc acgcatccgc ccacccttcg gccaaagcctt cgggggcaaa atgcctccgt 60
aacttcggag gctcacaaca ttggaaaatc tgacatggac cggctcttagc ctcgcggaaa 120

aaaattgtaa cttttgtaag caagagccac ttctttgaat atatgacct aacaacgctg 180
ccctt 185

<210> 1414
<211> 385
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-017-Q1-E1-A11

<400> 1414

cttaattaca ggccaaacct aaccaggcct gacaggattt cttggaaaac atacttcaat 60
aaccacctca tgtgcgaaat caagggccac cacctgacct ccgctgccat agtcggccac 120
aacggcgccct tttgggcccc gagcaccgca ttcccacagt tcaagacaga ggagatgacc 180
aacatcatga aggacttcga cgagcccggg ttccctggccc cgaccggcct cttcctcggc 240
cccaccaagt acatggtcac ccaaggcgag cccggcgctg tcatccgagg gaagaaggga 300
tctggangca taactgtgaa gaagacaagg caagcgatgg tggtcggcat ctacgacgag 360
cccatgaccc ccggccagtg caaca 385

<210> 1415
<211> 347
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H1

<400> 1415

actggagtgc aacgtccaaa ttgcatacat tgccctggatc gcacacatgt tgctcagtat 60
gcatatggac ttgctgcttt ggggaggcaa cttcatgcaa tgggactgac agatgtttta 120
aaaatccacc ctgatagcag cattgcttct gctttgatgg aaatgtacca gagcatgggt 180
gatgcacttg ctcatcagta tggaggatct gcgggacata acacggtttt ccctgagagg 240
caagggaaat ggaaagctac tactcaatct cgggagttcc tgaaatcaat taaacggtat 300
tacagtcatg cctacactga tggtgagaac caagatgcta taaatct 347

<210> 1416
<211> 278

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H10

<400> 1416

gcacacgttg agatggttgt ggctttggtg ttcttggtcc tatgcttcat ggtgcggtcc 60
 tccgactctc gcccacatgca tgtccatcac tgtcacttag tgcacagggg gtgctggtcg 120
 ctaatctgat atctgtatgg cgggcctacc ggctgectgt cgcgactata ttcgtgtgct 180
 gctgcgggta caccgacgtt aacaatcccc cttcaagag catgggacga tgtggcaata 240
 tccgcaatct tcaaggattg tctgggttgt gggtcctg 278

<210> 1417
 <211> 382
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H4

<400> 1417

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 aatctgtcaa tctcctattg atgatgttgt tctggcgccg ttgaattttt gagcttagaa 120
 tttagaaaag gccaaagaaa aaagagccgg cactcccaga tttagacgtg gagtttgcca 180
 agccctgggt ttgaggccgc ttcttacctt tttgcttaac caccactaaa gaaatacgag 240
 ctagttcttg gagaaaatgt aaatatgttt ttttggcgca agagcgggtg gcttgtatcg 300
 cactaaagga aaacagagtt caaataaaat gccggttgta atccccgtaa gttccacatc 360
 acttgttcac ggagagaatg ta 382

<210> 1418
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-H6

<400> 1418

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 tacaaggacg agaaggacgt ggaagacgtg caggtgacgg ggtgcacgat cgccggcacc 120

acgaacggcc tgcgcatcaa gtcgtacgag gactccaagt cgtcgtctca gccagcaag 180
 ttctgttacg agggcatcac catggacaat gtctcctacc ccatcatcat cgaccagaag 240
 tactgcccc acaacatctg cgtcaagtcc ggcgctcca aggtggccgt caacgacgtc 300
 gtcttcaaga acatccacgg cacctccaac acgccggagg ccatcacgtc caactgcgcc 360
 aacaacctgc catgccaggg cgtgcagctc gtcaacgtcg acatcaagta c 411

<210> 1419

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-G4

<400> 1419

acgcgggccaa cccgcccccc aagcccaccc agcgcgacga agctgggggg cgatcgctcc 60
 agcgccgcgc ggcacatcgc cccgggagcc gccgggggta acccgctctc tgtcccgctt 120
 caacgaaccc tcaggtccaa gtagtctgtt tcgtgagtta tccacagttg cgccgcaatg 180
 atgagtactg ctaatcgcta ccaacacatc aggtcaacta agcctgttgt aggcaacgca 240
 ataaaattga aggatctcat gataaacagt gacaatacga tatgtgctga ctgtgggtgca 300
 cctgatccca tatgggcacg tgctaataatt ggagtgtttc tttgcttaaa atgtggagat 360
 gttcatacgg gacttggacc tgacatctca aacgttttat ctgtaac 407

<210> 1420

<211> 205

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-E7

<400> 1420

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 cccaggtgt tcatccactc cgttcactcc tctgtgctct ccgcggtcag gaacttcggc 120
 aacttcatga aggtgctcat catccaggac aagatcagca gagctctgag tccgtcggtg 180
 gatgacatca ccaagtaggc agaca 205

<210> 1421
 <211> 310
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-016-Q1-E1-F10

 <400> 1421

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 tcatacatga tggcctcatg ttcaagcatg acttctccat taggtccggt gatattgggg 120
 ctgataggac ggcatttagg gagacactga tgaaccattt gcaggaaacg gcacttaatc 180
 atgtgaagac cgctgggctg ctatgtgatg gattcggctc cacaccagag atgagtatac 240
 gggacttatt ctgggtggtt agccagatcc aggctatcgt ccagcgttat ccatgctggg 300
 gtgatactgt 310

<210> 1422
 <211> 398
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-016-Q1-E1-F2

 <400> 1422

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 agacgtacga taacctgctt attttgcgac ccattccggt cccacgcaa ggccgagc 120
 gtgatctccg tccgtgccg catggcctcg caccgggcgc tgctgctgct gctcctcgcc 180
 gccgcgctcg tcgctgcgct ggcctctgtc gcatccgccc acgacgcaa cgccatgccc 240
 accatcctga ccccgctggc gcataccccg ctggggtcct tcgacggcga caagccggcc 300
 tctgacgacg acgccgtcga cgacgacgag gacgccgccc ctgtcggcgc gcccaacggg 360
 gccaccatga ctgaacccaa gggacgacgt cctcgccc 398

<210> 1423
 <211> 189
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-016-Q1-E1-F4

 <400> 1423

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gtcttccctcc ggggagatcg ggggtggta gcacgtgcgt actgggagtt cttcatgagc 120
tggtattccc atatgtcctc gtcgcacggc gaccgcctcc tgcgggtggc cacggtcgtc 180
ttcacgggg 189

<210> 1424
<211> 213
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-F6

<400> 1424

tggtctctcg tggcctccgc cgctgtggtc cgtgcgctcg ccggggcgct tgtggggttg 60
ttcttccctgc tggtcgctcg cttttgctcc ttctcggggg tgcgcggggc cggcgccgcc 120
tcgttccctcg ctttggtggg cgctctctcc gtgtgcgcct ctttccctgtc tgtctctggc 180
ggtcggttct ctgtgcgggt ctgccctccc gtg 213

<210> 1425
<211> 274
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-D11

<400> 1425

aatatatact ttccgtgtaa gacgagccgc cgcacttagg cggctactgc acagtcagca 60
gaatgaaccc atttctgaaa gccttgggac gacacagggt tgttttgggt cagccacacg 120
tttcaattgt cgctgtccct actttgatcc cggagtactg atagcttggt ttctgttcac 180
gattgattca ggtgtcattc ctttgttttg cgtgtttttt ttctgctctcc ttttaacgct 240
gagccgatat atatgtactg ggtctcctcc gaat 274

<210> 1426
<211> 438
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-D4

<400> 1426

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gcagcagtag cagcagccgg cgtgtgacgc tggtaactgct cggctctccgc ctgctgcttc 120
tggttggtgt tgcgcaggcg gtagtggagt tgggtgectgc tgatgataat atcgccgccg 180
ccgctgctgg cacggcggtg gacgatggcg agccgcctca gcagtgcgcg accccggtga 240
gcgtggagga cgcgtgccgc ggcgcgtccg agacgcacgc cggcgtggcc taacaccact 300
gcatggcgtc gctggggccc gatacgcgca tcaatgaagc cggcaacatt aacaatgcac 360
ggctggcagt tctgggcacc aggatggcca tcgaccatgc cttcagcatc aagtcaaaga 420
ttaaacacct cctccgag 438

<210> 1427

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-E3

<400> 1427

ttccgggaag acccacgcgt ccaagggatg ccagacacgc agtgcccat cgcgcccaac 60
accaacttca cgtacaagtg gcagcccaag gaccagatcg gcagcttctt ctacttcccg 120
tccatcgga tgcagcgggc ggcggggcggg tacggcgcca tcagcgtggt gagccgcctc 180
ctcatcccg tcccccttga ccagccgccg ccggagagcg accacgcggt gctcatcggc 240
gactggtaca ccaaggacca cgaggtgctg gcgcgccagc tcgacgccgg caagagcgtg 300
ggccgccccg cgggcgtgct catcaacggc aaggagcgca acgaccctga agccgccgcg 360
ccca 364

<210> 1428

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-B4

<400> 1428

cacgcgtcga tcctccgtga aagccgacgt cgacgtggac gccacaacg aggccgagca 60

atggatgcgc tcggagccgg ggacctccat gtcgccgtca tcggaagccg ggcacaacac 120
 ggtcatcagt aactcaacg atgtccccgg cgcgcgcctt cgcggggcac acgctcgagg 180
 atgccgcctc ggcggcaggc gccgtccccg cggctctgtc tcgttcggat gctccatagc 240
 gtatgaaggt cgctcccgt gctggaccct cgggtgctggc ggatgatgaa gcaggccgcg 300
 gcgtgccg 308

<210> 1429
 <211> 314
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-C2

<400> 1429
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 gtatattcac attaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaag 120
 ataaaaaaaa agataaggga ggcagctcaa acagataaaa tactagattg agcgaaaatg 180
 caacttaaat ggcgtcccc tctaggcacg tactgtcaag tccagtcgcc gtcgtttaac 240
 ctggtacggc cctgagaatc ccttgctgtt cttcaactga ctgctcttgt tagaaacccc 300
 ctttcgctg gccg 314

<210> 1430
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-C3

<400> 1430
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 gggggcacta aatacctacc acattgcact cagactacat atactgtgtt tgtgtgttgt 120
 atgccgtatg cgtgtgtgag cttgcgcaaa ttggacatct aggccgtgcg taccctgcga 180
 tgaaaggcgc cgtcatcggc gcatcgaccg tcctggtcgt ggcggtggtg gccaccatct 240
 gcgtcgtttc cttcaaaggc agcggcgatg gcgggagggc cgaggagggc gagatgtcca 300
 cgtcggtaaa gtccatcaag tccttctgcc agcccgtgga ctacaggag acgtgcgaga 360

aggcgtgga ggcggccgcc gggaacgcca ccagccccac ggagc

405

<210> 1431

<211> 310

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-C4

<400> 1431

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gccagtcgat cgttcaagaa cattaccagc ttaccaacat cagcagcatc agtctcacc 120

gttcgatgac atgggtccgcc tcggcgccgg cgccgtgttg gcgctcctag tggcggtcgc 180

tgcggtggcc gcgttcctcg cgggtgccggc ctcgtcgcac gtccggggag ctgaacgcga 240

tggggttgct ggctgagaag ggcggcagca tggcggggcc gcagaagtgc tcgggctctg 300

tgggcgagtg 310

<210> 1432

<211> 307

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A10

<400> 1432

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atttccgtgg atcatggccg ggttggcatg cctcttgact gctctgggtg gctttgggga 120

tcatecttgc gtagcgcgat ctccagacgc gtcgattcgt cggtcgtcct acgacttggc 180

gcggggattc ttaggacgat cgtgggtagc agatttgtga ccccatctg gcactatgag 240

ctaactctct gcgttacaga tgccagcgta tcgctcgagc tgggtgtgtc cgacatcaga 300

cacgttc 307

<210> 1433

<211> 420

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-016-Q1-E1-A2

<400> 1433

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gcagcaggcg ggccgcgccg gccgccgcac caccgggtag cccaggccgc gcgcgcgcgc 120
cgtccagctc gtctgctgtc gctcctccgt gatggccgac gtcgacgtgg acgccaacaa 180
cgaggccgag caaaggacgc gctcggagcc ggggacctcc atgtcgccgt catcgaggcg 240
cgacgacgac acggccagca gtacacccaa cgagtccccg gcgcgcgcct tcgcggggca 300
cacgctcgag gagccgcctc ggcgggcgcc gccgtcncgg cggtcncgtc ncgttcggat 360
gctccagagc gtgtgccggt cgctcccgt gctgaacctg ccgtgcgggc ggccgatgat 420

<210> 1434

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A4

<400> 1434

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caatgggatc cagggtcatcc attctacatg caaccacgaa gctggatgca ctgtctgcgg 120
atgtgttgtg aactagacgg ctcatattcg acgttggcaa cggatggaag catgtacacg 180
tgcatgacag acaaaccgca gctgccatgg gccatcatcc gcatcagtgt acatgatcgt 240
gtacctgtag ctgcttgctg acagtggccg tcgccgcgac agtgaacctg gtgcgcgcca 300
tcggggactt cttcctctca cgcacatgg gcccacatgt cgccatcatc ggcgtcatcg 360
tcgcccccat cctcgtgatg atcccgatga tcatttaccg gaagcgggac cccgtgaaac 420
ctcgcgctcc t 431

<210> 1435

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A5

<400> 1435

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 gtcaaggtgg acgccagcgc cgtcgaggcg gtggcgctgc cggatgaagcc cgccttgacg 120
 ctggaggaga cgggggagct tgagaaggag gtgtggggcca ggttctacgg cacgggcttc 180
 tggaggagcg tgtctcagct cgacgacgac gacagggtgac cggaacaatc aggcccgatg 240
 gtgagcgagc gatcgaccag ctctccggc gatgcttaag caatagcatg cgtttccttg 300
 gttgggtttc cttcgttggt tttctgcgga aataagagaa gatcgaggaa aaggaaatgt 360
 gatgcatggt cgtcgatcga ctatacgagt ttcttttggt ttgcctttt 409

<210> 1436
 <211> 214
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-016-Q1-E1-A7

<400> 1436

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 tttttttgtg ctcgcttggt atgataatat gcatggcaag ctccaaaatg tggtttccaa 120
 tttatgtata gcaaggggtt aaaaagttg gtaatcataa tgcttggtgcc ctgtagtattc 180
 atactattac cagccaact taatttcttg tttt 214

<210> 1437
 <211> 250
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-G11

<400> 1437

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 tgccgccatc tacacttctc tacttaatca tcgacatggc tgtctcgcgg cagagaccg 120
 gtgtacagca tggggagctc gatgaccatc gtggcgctct ccctgctccg ccgctccctc 180
 ctctcctggt ctttcgcggc gaccgccgat gcttgcggtt tccttttagct gtttggcgag 240
 gaccaattct 250

<210> 1438

<211> 139
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-G8

 <400> 1438

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 cggcatttag caatcgtga 139

<210> 1439
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-H4

 <400> 1439

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 gcgtgaagaa gagatctgtg aaccccatct ggcacgagga gctaactctg accgtcacag 120
 atcccagcct agctctgaag ctggaggtgt tcgacaagga cacgttcagc agggacgacc 180
 cgatggggga cgcggagatc gacgtggcgc cgctgggtgga ggcggcgaac gcgagcccgg 240
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 tcgccgacga gagccacgtg tgctggagga acggcaagtt cgcgcaggac atgatcctcc 360
 ggctcaagaa cgtggagagc ggggagattc agctgcagct gc 402

<210> 1440
 <211> 136
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-F12

 <400> 1440

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 tgtcagagac gactctaccc aatatggatc aggaagaaat gtatcagtga tcgcatcgat 120
 aaacacagtt tgtctg 136

<210> 1441
 <211> 347
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C10

<400> 1441

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gcccttttct  gacattcgca  gcgtggacag  gcgttgctgc  gcgaacggct  cctgtcgggg  120
gagtagcttc  ggcgtcagcg  gatcagtcgg  cttctgtgcc  cctgctggga  ggggtctctt  180
caccgacctc  ggcggctacg  tcatccacga  gccgcgtcta  ctgcgacaga  ctggggcgcc  240
gggtgtcgga  tcacctgtca  ccggaatata  ttctgtcccc  ggcggtgagg  cttacgtgca  300
tgcacttcgg  cttcggtcgg  atcgaccact  ctatcgtcgg  ggtgccc  347
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<210> 1442
 <211> 445
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H9

<400> 1442

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ctccccgacc  gccacatcta  ttaggtgcag  ccatgggtgc  ctgtgcaacg  aagcctaaga  120
cgcttgaggg  gaaagcccca  gctgaggcca  ccatctccac  acccaagggt  gcacctgaga  180
ccactaccat  ccacattgag  gttgcggcaa  aacatgcagt  agttgagaag  gtggaggagg  240
acaaggagga  ggcactaaca  gtggcggcga  aacaagagcc  agcagccacc  attgagcctc  300
agcagattgc  tagtgagggt  accacttcgg  aagtggcggt  cgtcgttggt  gagcctgaga  360
acaaagagga  ggaggaagtt  gtggagaaga  ccgatcatga  gaaggagaag  ccatcagcag  420
tccatgcaga  ggaaaatatt  gccac  445
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<210> 1443
 <211> 342
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B1

<400> 1443

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cttcctcaag aacgggcagc agatcgacaa gctcgtgggc gcgaacaaac ctgagctcga 120
gaagaaagtg ctagcagccg ctgatgccag tacgtcctag tgacacaagt ggaagtgggc 180
aaacgatctg tgatggcttc ccggtgtata gtttccatgg ttcattttgtg tgcttgtccc 240
atgtttgcct ggggacgatg acgttttaca attttggccc ccatcgcgcg cactcgtctg 300
tttctctcat ggaagccgtg tgaacctgtg cgtgtgtgtg ac 342

<210> 1444

<211> 200

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G12

<400> 1444

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gttcgcctgt ctccgtgtta tctgcaatgc aatcggatgc ttttggttca tcaatatcaa 120
acccatcaac tgggggcacg tctcctgcgt catcagatga tgggaataat gtccctgaga 180
tagtgaatgg ggatgaaaat 200

<210> 1445

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G2

<400> 1445

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ctccaccttt ctctttttct tgccacggca aaacaccttc gccggcgaga gcatggcgat 120
ggcgtaccgt gtccctggagg tcacctggt gtcggcaaat gacctcaaga aagtgtcgct 180
cttctcccggt actcgcatct acgccgtggc ttccatctcc ggattcgacc tccgcatccc 240
ttcccacagc acccaagcag accacagcaa cggctgcaac ccctgctgga acgccgtggt 300

acacttcccc atccccgctg ccgctgacac ccgcggcctc gcactccacg tgaggctccg 360
cgcccagcgt ctatacctgg gcgatcgca catcggcgag gtgttttgtg cc 412

<210> 1446
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G4

<400> 1446

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gaaaaccccg atgaattata taattataaa ggctagtttg acaacttcat tttctcaagt 120
gaatcctatt ttttcaagag aaaatgaatt aaattccctt gaaaaataa aacctcttag 180
aaaaataag gttgtgaaac tagccctatt aataaattta tgcagaatgc aacatcggtt 240
tccaccattt tctcttttac agaatactac tgctccgtgt atacggagaa actacatttc 300
acggagtagt aaataaacag ggattaatta gcgccgtgtg catgcatgca tacggcggtg 360
ggctggccga catgatcata acaattaatt a 391

<210> 1447
<211> 101
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H10

<400> 1447

attatggtgt gtacattttt ttagtcgata ttcttgttct tgtttgtggt gtagaaatgg 60
ttggatatgc taattttcaa tagccttgag ggttcgtggt a 101

<210> 1448
<211> 386
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-014-Q1-E1-H12

<400> 1448

ggcgcgtctt togtctcgt cccctctttg cgccgcccc agatccggca ccgccgctg 60

ctcgaacccg caccaccacgc ccgcaggccg ggaccggtgg gcgcgcgcgc ggagtganga 120
 gggagaggaa gggcgccatg gcggcgccgc cggcgaaggc ccgggcccgc tacgactacc 180
 ttatcaagct tcttctcatt ggggatagcg gtgttggaag gagttgcctc ctgttgccgt 240
 tctctgatgg ttccttcact acaagcttta ttaccacaat tggattgac tttagatac 300
 ggacaataga attggatggg aagcgtataa agctacagat ttgggataca gcgggccaag 360
 aacgcttccg tactattacc actgcg 386

<210> 1449
 <211> 290
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-H2
 <400> 1449

cgcgtcggag gcaaccatgc gcctgtccct cctcctcgtc gtcggtggccg ccctctcggc 60
 gcgcaccgcg gcgcagctgc cgctggcggg cggcgccggc ggcgcctga agccggactt 120
 ctatagccag tcgtgcccgc gcgcggagcg gatcattgcg gaggtgatgc agacgaagca 180
 gatggcgaac ccgacgactg ccgcgggcct gtcgcgcgtc ttcttccagg actgcttcgt 240
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<210> 1450
 <211> 381
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-H3
 <400> 1450

tcctcccccg gccggcaaca aatcaaccgc cggaaacggc aaaacaacca atggcccctg 60
 gcccaacaaa ccccaaaacc cttaaggggc aggccccacc taaggccgcc gtctcaacac 120
 ccaagggttc gcccgaggcc actccaatct ccgttgaggt tgccgctgat gaacaggtac 180
 ctgaaaaggt ggtggtggag gagccggctg cggcgccga cgttgagcat cagaaggcta 240
 atgaggtgct cgctccagag gcggccgctc ccgagccga ccacaaggag gaggaagccg 300

tggagaagac cgctcgtegan gaggagaagc cagcggcagc agcccatgca gaggaaaagg 360
tcgccaccgc cgccgagacc a 381

<210> 1451
<211> 385
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H4

<400> 1451

ttataccaat ccctggccga aaaacggaag gccaatcctt gggaacccaa ggtccaggtt 60
cataaccgac aacttcttcg acccaaaciaa gtccttgcac tccgtggacc tgtcgacgga 120
gcacaagatc gtggacctca aggaccggat caaggcctcc gtcgtcatct ggcaccggaa 180
gatcagcaac aagctctcgt ggggccccgc cggcgtcagc ctggagaagc gggaggagtt 240
cgaggagcgg gcgcagaccg ccctgtctcat cctcaagcac aggttccccg gcatccctca 300
gtcggcgctc gacatcagca agatccagta caacacggac gtcgggtacg ccatcctgga 360
gagctactcc aggacctcgc agagc 385

<210> 1452
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G10

<400> 1452

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cacaagttgc gatggttgtg gcgttgtcct tcttgggtgag cgggtgcatgg tgcggtcctc 120
ccaaggtcac ccctggcaag agcatcactg ccacctatgg caaggactgg ttagacgcta 180
aagcaacatg gtatggcaag ccgacgggtg ccggtcccga cgacaatggt ggcggctgcg 240
ggtacaagga cgtgaacaag ccccccttca atatcatggg cgcgtgcggc aacatcccca 300
tcttcaaaga tggctctgggt tgtgggtcct gcttcgagat taagtgcgat aagcctgtgg 360
agtgtccgga caagcccgtg gtggtgcaca tcacagacat gaactatgag cctat 415

<210> 1453

<211> 382
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-014-Q1-E1-F10

 <400> 1453

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 cctccgcgcg cctgtcctcc tegtccctcg ttctgcactc acctcctgag agtgatgaga 120
 caagcggcgg cagcgagcag caagccacgc cggaagacga gaacaaggag aacgagcggc 180
 agctggcgac ggagaatgcg tacgcgagg ataacgtcgt ctaccaggag atgctcaatt 240
 acgccaatga gaaaggtctg gtgtccccga acaaaggcac ggggtggtac aggggcatcc 300
 cccgggagtt cgtggacgcc cacaacgagc tccgcgcgcg ctacggcgta ccgcccata 360
 agtgggacaa ccagctggct cg 382

<210> 1454
 <211> 450
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-F11

 <400> 1454

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 cggggggcacc cgccccggc tggccgacct ggcccgtgta cgtgtcggcc gaggtgggca 120
 tgaccgtggc cgcgttcgcg caccacgagc tcaacgccat caaggacgac gacgtcctgt 180
 acaagtgcac cgacacctgc tccgaggaca tcgaggaagc cgtggcgcac ctacgcgccc 240
 tctcccgcga cttctccgac gccaggttcc tcgaggtcaa gtcttggtc acctccacgc 300
 tcggcggcac cgccacctgc gaggacgcct gcaaggacgc ccccgtcagc gacatcaaga 360
 acgtctgcac aaccaagagc ttcgagtttg agaagctgct gcgcgtcacg ctggacctca 420
 tcaccgaggc ttccggctcc atgtcggccg 450

<210> 1455
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F12

<400> 1455

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tcacctctcc ttcctctcct cctgcctgc cagggagagg ggaagtcaga ggcacggagt 120
ggcgcagagc agacgcacgt gaaccattgt agctgtccct gtcgtcgtcg tcgtcgtcaa 180
cgaatccaca caaggaaagg atggagaaga agccgaccat cctcatgaac aggtacgagc 240
tcggggcgac gtcggggcag ggcaccttcg ccaagggtga ccacggccgg aacctcgcgt 300
ccggcgagag cgtggccatc aaggatcatc acaaggagaa ggtgatgcgc gtcggcatga 360
ttcgacagat caagcgcgag atctccgtca tgcgc 395

<210> 1456

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F2

<400> 1456

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agggggggagg ggaaaacacg tacattcacc cggcgggaat aatggcctcg gttccggctc 120
cggcgacgac gaccgccgcc gtcattctat gcctatgcgt cgtcctctcc tgtgccgagg 180
ctgacgaccc gaacctcccc gactacgtca tccacggccg cgtgtactgc gacacctgcc 240
gcgccggggt cgtgaccaac gtcaccgagt acatcgcggg cgccaagggt aggctggaat 300
tcaaagcact tcggcaccgg caagctcgag cgcgccatcg acgggggtcac tgacgcgacc 360
ggcacctaca cga 373

<210> 1457

<211> 434

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-F3

<400> 1457

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ggacgaaacc gagaagggtga aagggttcac gtcagaatcc actgtgagct acagagatcg 120
gctgaagatc atggccggcc tgggtcaacct ggacgacctc cagctgggct ctacggagag 180
gaagctcgtc caggcgtaca acgagaagcc agtcctctcg cggccccagc acagcttcta 240
cgaggggagag gactaccttg aggtggacct tgacatccac cggttcagct acattgctan 300
gaaggggctg gactcgttca gggcacgcct caagaacggc atcctcgatc tgggggtaac 360
gatccaggcc cagaagcagt cggagctccc tgagcaggtc ctctgctgcg tcagggtgaa 420
caagatcgat ttca 434

<210> 1458

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F4

<400> 1458

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gggacaggaa atcaccggcc atggcctcaa ttccggcgac aaccttcgcc gtcaccttat 120
cgtcctcttt ctgtgccgcy gctggaaccg ccgtcgacaa cgacctcccc gactacgtca 180
tccagggccg cgtctattgc gacacctgcc gcgccgggtt cgtgaccaat gtcaccgagt 240
acatcgcggg cgccaagggt aggtctggagt gcaagcactt cggcacccggc aagctcgagc 300
gtccatcga cggggtgacc gacgggaacg gcacgtacac gatcgagctc aaggacagcc 360
acgaagaaga catctg 376

<210> 1459

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F5

<400> 1459

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gctgctgtcc acggccacgg cgcgggtggc gtcgctggac cgccgcctgg gcctcagcga 120

caagttcagc ctcggcacgg ccgcggcccg cggcgcgggcg cgcggcgctcg acgagcgctt 180
ccaggtcacg gagcgcgctt ggggggcctt ctcggcgggc ggggaggtcg tggccggcag 240
cccctacgcg tcccgcggcg ccgcctgggt gtcggcgggc gtcggcgccg tcgcccgggc 300
cgcgtccgac gttcgggcca atgacaagga aaaagtgggc aaggcccaag cagaggggga 360
ggcctcggcg gcggagcatg gtcaactacg gtcgtcccgt gtcgacgtgc acgacggaca 420
gggacgtgca gctcagcacg gtgaccata 449

<210> 1460

<211> 454

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F9

<400> 1460

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cgagcgggtg ccacgatgac gactaataag ccctcctcc tcctcgccct ggcgtccgcg 120
ctccttggtg cggcgccggc cgccgcgaac gcgcccggcg gggcggttcag caactgggtg 180
gcgatgaacc agcagagcta cgcgctgtac gcgcagaagt ccgtcgggga cgggggcaag 240
gagcccctgg acaagaagct gtcggaggcg gagaagaaga aggtcacgta cgtggtggac 300
cccagcggca agggcgacta caccaacatc accgcggcg cggaggatat cccggtgagc 360
aacaccaagc gcgtgatcct ggatctcaag cccggcgctc agttccgcga gaagctgttc 420
ctgaacatca gcaagccgtt catcacgttc cggt 454

<210> 1461

<211> 312

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D3

<400> 1461

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caacctcgtc acgcccttct ccgacaacaa ttacttgcca aggggctgca acttcgaagg 120
aaaactcctc cccgcaagca aaaccccaaa aaggacttgt ccgtaaccag gcaagaacaa 180

tcaaaaccac cccgttgagg tgggtgttgac gccggactcc gacgagagct cgccgaagcc 240
gccgcccgcac gcggaccagg actcgcccgg aggctgcgag tcggggcgcc gcagcacggt 300
gccgttcaag gt 312

<210> 1462

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D4

<400> 1462

gaccgcttcc ttgtccgtgc cctacagctg gtcattgagcg cccgcccac catggcgggcg 60
ggggcgcccg tgcgcgcctg ggtgggtggcg ctggcgctgg tgctggcgctg cgcgctgctc 120
cagccgcggc cgtccgacgc cggggcgag cctgcccgc attcgccggc gacggcggtg 180
tcgtcgggcg ccgccaagcc caagtgcgtg gccggcgcca ggaacgacca cgcgtgccgc 240
ttcggtccg tgcacgaccc ggacagccag gaggaggagg gctccagcgt cacaatcgac 300
gcgcccgcg ccgcgcccga cgacgtcggc cactacgacg gcagcgacta caacgacccc 360
gacgtgccc acaacgacca gctcgtcgtc gtcggccact gaaa 404

<210> 1463

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D5

<400> 1463

gtcgcacttc cggcaggcag acgagctcct cgccgattca ggggtggcatt gcagcttctg 60
cttccgctac ataagcgatt tcgcattcaa gatgcaagcg tatagccacg tcgaccggat 120
caggttcaag tacttctga accctgagag gatccaagat gtcattctgca gaggggaggga 180
ccttttcgat atgcttccag aagagtacac gttccaagag atcatcgcca agctggggcc 240
gatcccagac acgtattctg gcgttcatct tcctagctat ctgctaagga atgtcgaccg 300
gtttagatac cttctaccgg gcaactgcag gagagaaagt ggctagggtt tatggcccac 360
taccctgcaa cctgttgtgc gtgggtgggt ggggtgccagt gccacactgc cccgctgca 419

<210> 1464
 <211> 450
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-D6

<400> 1464

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ggaaagggtcc cgcccttttc ctccgacatc cacagggggg aggggaaaac acgtgcattc 120
acccggcgggc aataatggcc tcggttcggg ctccggcgac gacgaccgcc gccgtaatcc 180
tatgcctatg cgtcgtcctc tcctgtgccg cgggtgacga cccaacctc cccgactacg 240
tcattccaggg ccgcgtgtac tgcgacacct gccgcgccgg gttcgtgacc aacgtcaccg 300
agtacatcgc gggcgccaag gtgaggctgg agtgcaggca ctcggcacc ggcaagctcg 360
agcgcgccat cgacggggtc accgacgcga ccggcaccta cacgatcgag ctcaaggaca 420
gccacgagga ggacatctgc cangtggtgc 450
```

<210> 1465
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D7

<400> 1465

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tcgtcctcgc ggctgccgtc gcggtcctgg ccgcgcggcc ggctctgca ggcgggggag 120
ccgcggcggt ggcgagatc tgcattgaaga ctccgtcccc cgacctgtgc accaggacgg 180
cggggaagca cgccaacaag tacaaggtgg tggacgcggt gacggtgcta gagatgcagg 240
tggacgcgtt caagaagcgc gtgaaggcgg cgcggaggct cgccaaggag gaggtcaaga 300
cggccgcgac gcccgaggcg cggagggcgc tgaacctctg caagacctac tacctggacg 360
ccgccgacaa cctcggcgcc tgcaagcgcg ccatcggtt ccgcgacgcc gttcacatcc 420
gcgccacgat gagcat 436
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<210> 1466
 <211> 436
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-014-Q1-E1-D9

 <400> 1466

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 gtgaaggcgg cgggcgtggc cgcgctgctt gtggtcgcag tgggtgcgcc tgccgcgcgc 120
 ggggcggcgg tggcgggtggc gggagggggcg ccgtcggttc cggcgggtcc gctggacatc 180
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 tggaagaacg cgtgcgaggg gacgggggta cagaagatcg tcatcccgcc gggcaactac 300
 ctgacggggc ggctggagct gaagggcccc tgcaagtcct ccatcatcat ccgtctcgac 360
 ggcaacctgc tcggcaccgg cgacctcagc gcgtaccaa ggaactggat cgagatcgag 420
 aacgtcgaga acctgt 436

<210> 1467
 <211> 295
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-014-Q1-E1-E10

 <400> 1467

 cgcgtccgcc cacacgtccg ctctcttctt gatggcgggc gctaccacat attcggcggc 60
 gcggtgggtg cggacccagc ggttgtgggt gctgccccgg cggcctgcag ccccgggcgc 120
 tcgcgggccc gagccccggc ctcggtggcg gcacggacgc agaggctccg gcctagcgca 180
 agcgcgatgg gcacagccgc acccccgaca gcgcgggggc cagtttactc ggcagcccg 240
 ccgtgagtgc gcggactcct gggcgcacag gcgcaggtac aacctcaage gcaca 295

<210> 1468
 <211> 445
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-014-Q1-E1-E11

 <400> 1468

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 acaaccctgg gttaaaggag gacggcaagg gccggacacg ccgctggaca acgcggtcct 120
 cggccggctg aagcagttca cggccatgaa ccagttcaag aaggcggcgc tgcgggtcat 180
 cgcgggggtgc ctgtcggagg aggagatccg tgggctcaag gagatgttca agagcatgga 240
 ctccgacagc agcggcacca tcaccgtgga cgagctgcgg agaaggctgg ccaacaaggg 300
 caccaagctg agcgaggccg aagtccagca gctcatggaa gctgccgacg ccgacgggaa 360
 cgggacgata gactacgagg agttcatcac ggcgacgatg cacatgaacc ggatggatcg 420
 cgacgagcac ctctacaccg cgttc 445

<210> 1469
 <211> 396
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-E4
 <400> 1469

acgcgtccga aagagccagc cagagaaact aataaaactc tcgccgccgc catccgagcg 60
 aacaagccaa ccgaccccggt cccaaggca atccgccgcc gacgtaccac caccaccgca 120
 ggagcgagat ggagatgaag aggatcctct tcgccgtcct cgtcgtcatc gccgcctcgg 180
 ccaccgcagt gctggcctcc accgaggccg ccgccgcggg cgcaccaact gcctccgagt 240
 cgtccgccga ggctcccgtt ggcgctggcg ctggcgctgc cgctggcgcc gccgcgcggg 300
 ggccctccgc cagcagcggc gcgcccgcgc tcgccgccgc gccgcgcggc ctctctttct 360
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<210> 1470
 <211> 410
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-D2
 <400> 1470

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 aatgctctac cgacctgaat tgaatgctat cggataaccc catgtacttt tgtccttaag 120

ggtataacac cataggtaat gtaacaattg tttgcacatg taacatgatg accgagaaga 180
 gaaacatgca aatggagaag gaattgtttc tgcctttcta ggattcttct tagcacaatg 240
 tgcaaaactt tttcataatg taagagagtt ctggcgtaa aaaaaaaaaa aaaaaaaaaa 300
 aaatacataa aaataaagtc tgcattaaaa gaatagacgc cacaacata cagaagatac 360
 tcatggcatt cgaagacaac aaaaaaaaaa aaaggggggg ccccccaaaa 410

<210> 1471

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B9

<400> 1471

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 catggcatca tcggccgcgc tcttgggtgt agcctcgcg ctagtggcgg ccaccgcccc 120
 acaggtagcg gaggcaaaga agaagagagc ggcggagagc ggcgagcgg cgagggcgaa 180
 gaagatccag gacgacttct gctcgacgct gtgcgagggc aagaagggga cggacctggt 240
 cgtgtgcaag gagtctcgcg cgctctccca gcagtccaac ctggtgctgt acggcaggat 300
 ccagtgaag ggcaagtga ccgagcagaa gggcatcacg gcgccggcca tgaaggtctg 360
 ccaggaggag tgcgacaagg cgtacgtggt ga 392

<210> 1472

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-C1

<400> 1472

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 accaattaca aggacaatgg taattggttc aaaattcaac gcgtggataa cctggccatc 120
 accggcaagg gaaaccttga cgggcagggc ccagccgtgt ggagcaagaa ctctgcacc 180
 aagaagtacg actgcaagat ccttcccaac tcgctggtga tggacttcgt gaacaacggg 240

gaggtgtccg gggtcacgct gctcaactcc aagttcttcc acatgaacat tttaccggtg 300
 caaggacatg ctgatcaaag acgtgaccgt gacggcgccc ggggacagcc ccaacacgga 360
 tggcatccac atgggcgact catccgggat tcacatcnna caacacgtca ttgg 414

<210> 1473

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C10

<400> 1473

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 gttatcctcc tcttgcatg cattgcaggt cgtagttgag cagcagcaac cactgcacag 120
 gatgtcgtgg cagacgtacg tcgatgagca cctcatgtgc gagatcgagg gccaccacct 180
 gagctctgcc gccatagtcg gccacgacgg cgccgtttgg gccagagca ccgcattccc 240
 acagttcaag ccagaggaga tgaccaacat cattaagggc ttcgacgagc ctgggtttct 300
 ggccccgatc gggctcctcc ttggccccac caagtacatg gtcattccaag gcgagcccg 360
 cgctgtcatc cgcgggaaga agggatctgg aggcataact gtgaagaaga ccggacaggc 420
 gctggtgatc ggcattctacg 440

<210> 1474

<211> 84

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C12

<400> 1474

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 ggcatcagac gctgtctccc ctgc 84

<210> 1475

<211> 108

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C3

<400> 1475

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ctaagacgac gaaagccttc gtttctcctc gtggtctgac catccaat 108

<210> 1476

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C4

<400> 1476

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acggcggaac caaaggtaaa ggtgctggac ctgacgatcc tgtcacctgg cagaccggac 120
ctgacccctc cgatcccgtt ccaggctgac gagaagggct atgcgtttgc cctcaaggac 180
ggcagcccct acagcttccg cttctccttc atcgtctcca acaacatcgt gtcaggcctc 240
aagtacacca aactgtctg gaaaactgga gtcaaagtgg agaccagaa gatgatgctg 300
gggacgttca gccccagct tgagccctat gtctacgagg gcgaagaaga gaccaccctc 360
gctggcattt ttgcgac 377

<210> 1477

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C9

<400> 1477

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ccccgtcctc ctcaccgagg cgccccctgaa cccaaggct aacagggaga agatgaccca 120
gatcatgttc gagaccttca acacccccgc tatgtacgtc gccatccagg ccgtgctctc 180
tctgtatgcc agtggccgta ccacaggtat cgtgctcgac tcgggagatg gtgtgagcca 240
caccgtcccc atctacgagg gatacgccct ccccccagcc atccttcgtc ttgacctggc 300
cggtcgagac ctcaccgact acctgatgaa gatcctgact gagcgcgga actccttcac 360
caccaccgct gagcgggaaa tcgtgagga catgaaggag aagctcgctt acatcgccct 420

ggactacgac caggagat

438

<210> 1478

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D1

<400> 1478

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ctaaatggct ccggcaaccg gagggcccct ttggtataat gatctcggta ataaatgcaa 120
ggccttaggt cacggccatt tccttgatcg attattttcg cggaactatt tatgcagctc 180
aaaatttata ctactatata tacctacgga aagcaacaat tcaaaccata tactggagtt 240
tgtttaaggt atcatcgagc agaaatatat tcttggtatt cgtagcatta tatttgatt 300
ttattacacg ttttgataat aatcagtaaa catcccggaa ttcggcttca gctcacacat 360
gtaaaacata gaaaacgttt gtgtgca 387

<210> 1479

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D10

<400> 1479

aagactctag tatgagtcac acataaactt tataaataaa aaaatagaat agtacacat 60
aacaacatac aacagctttg cctcgatcga gagcatgcat gaatcacagg cgtcgtcgaa 120
tcaaaagaaa ggaagaaaca aaatgatgtg tgggggtgggg gtttggtgca tggccgtcgc 180
tgttaaaatt cgacacacga cagttgcgta aatagacctt gcgtaatcag ctgcacaaac 240
gaatgagaga gcgagcgagg gaagcaaaat ctgggtgaag agatgaatag atgatgaccg 300
gaaccccgcg cggcctggca aactgggcct aagcacctgc tccgattcat ctgctctgct 360
gggc 364

<210> 1480

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-D11

<400> 1480

cacgcctcta ccatgacgtc ccgggagcca caacctctcc tgctgtcgct gctggtcgcc 60

gtgctaaccg ttggcgccga tgttcccaaa gccgggcaag ccaaaccctt aaagccttgc 120

cgcccccttg gtaaacaaca accacggaaa gttcacggcc gggccgtgga aaccgcacca 180

cgcaaccttc tacggcnggc gtgacaggtc cggcaccacn gcgggcgcgt gcgggtacaa 240

ggacacgcgc acgcatgggt acggcgtgca gacgggtggc gtgagcactg tgctgttcgg 300

tgacggcgcg gcctgcggag ggtgctacga agtgcggtgc gtggacagcc ctacggggtg 360

caagcccgac gcggcagcgc tgggtggtgac ggtgaccgac ctgtgcccgc ccaaggatca 420

gtggtgcaag ccaccg 436

<210> 1481

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D12

<400> 1481

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gcctctacaa cttccgcagc cagggcgagg agccggagcc gttcgacccc agcatgaacc 120

cgtcctacgc cagggggctg caggacgtgt gcaaggacta cctcaaggac cccaccatcg 180

ccgcgttcaa cgacatcatg actcccggca agttcgacaa catgtacttc gtcaacctgg 240

agcgcggcct cggactgctc agcaccgacg aggagctgtg gacggacccc cgcaccaagc 300

ccctggtgca gctctacgag tccaacccca ctgccttctt caccgaattc ggccgcgcca 360

tggagaagct cagcttggtc ggcgtaaga ccggcgccga cggcgaggtc aggcggcggtt 420

gcgac 425

<210> 1482

<211> 448

<212> DNA

<213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-A2

<400> 1482

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gggtccagcc acgcgtccga tcgacatgaa tggacgcaca accgggtatg ttgcgccgcc 60
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tcgtcgttgt cgctgcccc a gtgccgtgcc gtgaagctcc acctgtccat ggagaagtta 180
ttatggcctc gccgcgttga accgggcgcc ggggctcggg aattcttcac cggagaccgc 240
gaacccaactg tcttccgtgg ccagcctctc cgctgactcc ttctctgcgt gaggtcacga 300
gtcacctgat gagcaagttt ggtacctgga atctcaagtc ncaagtcaag aacatgtacc 360
agagaatgag gcgcttggag gatgcgggtga tgatttcgtg agtgggtctag gccgtcgtct 420
cncagtcaac tttgggttgc tggaccgt 448
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<210> 1483
 <211> 408
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A4

<400> 1483

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cgggggcagc caagccttcg gtatcacccg attacctggg ggcgggtcct ggttcaaaac 60
aacggaacaa ccaagggcaa ggaaacctgg ttttggacca ggaccaattg caacaattct 120
tacaattcaa ggttgttccc aattacctgg atgaggggtt tgggtccaac tttcaaattc 180
gcaggaacaa cgcggatcag cacaaggtcc ttcaacttca aaacatccaa ttggaaaaaac 240
gttctgtttg agacagtgac agtcaaagcc tccggcgaca gctccaacac ggacggcatc 300
cacatcggcg actccaacaa cgttacaatc agcagcatca tcatcggcgt cggcgacgac 360
tgcatttgca tcggccccgg gagcaacatg atccgcatcc atggcgtc 408
```

<210> 1484
 <211> 419
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-A5

<400> 1484

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ctcatccttg ctagtgatgg actctgggat gttgtcacta atgaggaagc tgttgccatg 120
gtcaagccta ttcaggacct ccaggaagca gcaaacaagc ttctcgaaga agcgtcccga 180
aggggaagct ctgataacat caccgttgct atcgctcgct tcctatatgg aactaccggt 240
gataaatcag gcgcagacaa agagaccacc aatgaccaa actcctaatt acctcctggt 300
aggattcctc atgcgtgtgt tttcttctgg ctggtgtatc tgatgctcaa agtanatgct 360
ccgtgtgtct tccgtgctg ttccggcaag aaactgaatc ccccgaccgt cgtcgtgat 419

<210> 1485

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A6

<400> 1485

ttcgcccgct gaccacgcg accgaggctg cgtgggggtca cttagtctgt agtcaacgat 60
gatgtgctcg agagctccct taaattcgtc atcattggta ctgatggagt ctgagatggt 120
gtcactaatt aggagtctgt ttgcacggct aacctattc atgagccgca ggatgtatta 180
ctgaagcttc tcaaagaagc gtcaccattg ggagcctctg aacagatcac cgttgtacat 240
cgtcggcgct ctatatcgag ctacgggtca gtactgaagc tgaaattctg agacgaccag 300
tgatcagtgc tccaaagtag ttgcagctcg gattgctcat gcatctgtgt tctt 354

<210> 1486

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A8

<400> 1486

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ttctattcca gcatggccag ttcattaccg gcaagggaaa ccttgacggg caaggcccag 120
ctgtgtggac caggagggcc tgcaccatta actacgactg catgatcctt cccaactcgc 180

tggtgatgga cttcgtgaac aacggggaag tgtccggggt cacgctgctc aactccaagt 240
tcttccacat gaacatgtac cggtgcaagg acatgctgat caacgacgtg accgtgacag 300
cgcccgggga cagccccaac acggatggca tccacatggt cgactcatcc gggatcacca 360
tcaccaaacac cgtcattggc gtcagcgacc actgcatctc catcggcccc cggac 415

<210> 1487
<211> 453
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B11

<400> 1487

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cgggcggggc tcaacaaccc ttctgaaaaa ttaaaacttc tccttgaggc ctgagcccct 120
cgcccggggtg agccaagccg gcgcacgtcg ccccggggct cacgctcacc acgagcccaa 180
ccaattaata atatatatat atagctagga tcgatcgtca gtaacatggc aggtccgcc 240
gtcctgaaga gccccctgtc agtcctcgtc tacatcctcg ccgccgtgcc cgccaacgcc 300
gcggcgacgc cgaccgacgc cgccatcgac gaggcgtacg cgcctctcgt caacctcacc 360
gctaaccagg agtactgggc ggagcgcgcg gaggcggcgc acgcgtacaa ccgcgcggcg 420
taccagaccg acccgtggg cgtcgtgcag cgc 453

<210> 1488
<211> 412
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-B4

<400> 1488

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catcattgcg gaggtcgtca tccccgcac cgccatcgga gacaagtgcg ccgcctgcaa 120
ggccgttgct gcggagctgg agattggaat ttcgagtgcg aagccgagaa atcacttggc 180
cttgcgcaac cgcttaaatt ctaaaggcca gagggagggg aaggtcatcg attatagggt 240

cagtgaagctt cgggttgtgg aacttctgga tggcctatgc gataagatgc aagattatac 300
 cttaaagaag ttggaatcag gcgaaaaggg atgggttaaa gtaacagact ggaatagctt 360
 tcaaactgaa aataaggcag cagcaagagc gcactccana aaactgtcca cc 412

<210> 1489

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B5

<400> 1489

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 aacgatgcaa acaacagtag cagcaacacg gcggtgtgacg ctggtaactg ctcggtctcc 120
 gcatgctggg ttctggttgg tgttgcctaa gcggtatttg gagttggtgc ctgctgatga 180
 aaaatatccc ggctgccgcy gatggcacgg ccgtggacga tggtaaccg cctcagcatt 240
 gggcaacccc ggtgagcttg catgaggctt gccgcggcgc atccgagatg cacaccagc 300
 gtggcctacg acaactgcat ggcgtcgtcg ggcgcgcacc cgcacatcac ggaggccggc 360
 agcaataaca tgcacgggct ggcggtgctg gccaccagga tgg 403

<210> 1490

<211> 432

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-B7

<400> 1490

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 ccatctgcaa gagccacgga acaccaccag atgagaagat tgccatcacc aaagctatta 120
 taggggtatc gaatggatcc aagccccac tctttgctgg catcatagca cttgtgatga 180
 gcatcgcaac gatggtccgt ctgaccgcga gcatgatgcc tgggaagggt ctcggtgctg 240
 ccataggtgg agctaccctc tcagaaggta aatcaaaagt acaagagcgc cagcgggtcca 300
 agctatcaga agaggctgtg gaggaagctg aagacgccgt ctctgcaaag cgcctctcgg 360
 agcttgagga gaaggtcatt gcactcctga caaaaccgc atcaatgcct gctgataagg 420

angaggttct gc

432

<210> 1491

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A10

<400> 1491

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cgacgagctt ccaccggtgg ccaagacctc tgccacgccc gaaccgtacg catctctgaa 120
cgtcgccggc ggccggcagc ccaacgagcc ggccggcggg aggccgccga agctgtcgat 180
ggagacgttc tcggggatga tcaagaggcc gttcgccaag ttctgagcc cggatgatcaa 240
gggcgtgtgc gccaaacagg agtaccggga ggactgcgag tcgtcgatcg ggggcctccc 300
gggggccgcg tcggcgccgg ccacggacag cgtgggcgtg ctgaagctgg ccatggaggc 360
ggtgcggcag aaggccatcg aggcgatgaa cgcgccacg gacaggatga acgcgccggg 420
cacggacccg acgacc 436

<210> 1492

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H1

<400> 1492

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ttggtgctgc accggccgcc gcgaacgcgc ccggcagtgc gttcaggagg ggggtggcga 120
tgaatcatca gagctaggcg ctgtacgcgc acaagtcctt cggggacggg ggcaaggagc 180
ccctggacaa gaagctgtcg gacgcggaga ataagaaggt cacgtacgtt gtggacccca 240
gcccgaatgg cgactacacc aagatcaccg cggggctgga ggatatcccg gtgaccaaca 300
ccaagcccct gattctggat gtcaagccct gcgctcagtt 340

<210> 1493

<211> 313

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H10

<400> 1493

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 taaccatcga gagggcggtc gagagaaacg agagcggcag acaccatggg gagctcgagg 120
 accatcggtg cgtccccctt gtcctcctc gccctcctcc tcttggtttt cgcggccacc 180
 gccgaggccc gcgttggtccc cgagctgttt ggcgaggacc aattccagcg gacatgcaac 240
 caggtgcact tcaggaagat gtgccagagc ttgacgaggc tcccgagggt gaccacgccg 300
 cgccaactgc tgc 313

<210> 1494
 <211> 396
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H12

<400> 1494

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 aggtcgccgc gttgcagaag catcctgacg ttgtgcaggc gctgcctgac gtgaagtaca 120
 cccttgagga caggaaccac ctcaactgaa ccgagtgcgg ctttcaccaa cagatacat 180
 agctcggcac tagtgccatc tcatgttagc aagtgtgcat gtgcccacac cctaaggtca 240
 gaatttatat aagcatgcta tgtgtgggct agtgatggta atttagtctc ttcataaaga 300
 ttgaatgctg taccgggagc gtacgtacat attactacc agcctgctgt tcattgtttg 360
 atatcaccgt ggattcacga gactgctggc actgat 396

<210> 1495
 <211> 458
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H2

<400> 1495

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acggcgggccg ccccaatcgg ggacccgcag caacaacggg gcgttcccgg gggaaagcga 120
acgcgacggc gtccccgtga tgggggtccac cgatatccgg atcgagcacc tgtccatgag 180
cagctgcgcg gacgggctgg tggacgcggg ggacggctcc accgccatca ccgtctccaa 240
cggccacttc acgagggcacg accacgttat gctgttcggg gccagcgacg ccgcgtccaa 300
ggacagggag atgcaggtca ccgtcgcctt caaccacttc ggcaaggggc tgggtgcagcg 360
gatgccgcgc tgccgtcacg gcttcttcca cgtggtgaac aacgactaca cgcactggct 420
catgtacgcc atcggcggca gccggaaccc caccatca 458

<210> 1496
<211> 413
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-013-Q1-E1-H4
<400> 1496

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ggacgcctcc ttccggcgcc gcttcgccgc ggccggcctc gtcaaggcct ccgtcccgcct 120
ggacggcggc gcgaccacgg tgcactgctg gcgcttcccg ccgagcgccg acgacggcgg 180
cggcgaggac gcccgccccg tcttggtgct cctgcaaggc tttgggcccc cggcgacgtg 240
gcagtggcgg cgccaggtgg gcccgctctc gcgcgggttc cggtcatcg tcccggacct 300
gctcttcttc ggccgctcgt ccacgtcgtc ggccgccggc gtctccgagg ccancaggc 360
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<210> 1497
<211> 434
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-013-Q1-E1-H6
<400> 1497

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gggaacgact ctgtccgcta tgaagacagg acagtgggag ggaaagagga agtcgttgag 120

gcgatcaagg caacagggcg gtgcaacctg ttcctcgtcg gacagggcac gccctgcatg 180
 ccgctggttg actggagcac ggacagcccg gagctcgggc cggtaggttac ttacctggcg 240
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 aagcacgacg acttcgtcga ggaggtggcc gacatagcgg tggacgttga cacgccgggc 360
 cccagtaacc ggggaaacaa tactagcttc catgccggat gatacgtgct ggtgttagat 420
 gtattattaa catg 434

<210> 1498
 <211> 443
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-H8

<400> 1498
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 gccatggcga actcgtcgtc cggcctggcg gtgagcgacg agtgcaaggc gaagttccgg 120
 gatctgaagg cgcggcggag cttccggttc atcgtgttca ggatcgacga caaggacatg 180
 gagatcaagg tggaccgcct cggcgagccg aaccagggct acggcgactt caccgacagc 240
 ctccccgccg acgagtgccg ctacgccatc tacgacctcg acttcaccac cgtcgagaac 300
 tgccagaaga gcaagatctt cttctttctc ttgtcccttg atactgcacg caccgggagc 360
 aagatgctgt acgccagctc caaggacagg ttcangangg agctggacgg catccagtgc 420
 gagatccagg ccaccgaccc caa 443

<210> 1499
 <211> 361
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-H9

<400> 1499
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 ccacgtttct cctcgtctgtg cttcatcgtg atgggtgtggt gaggtgaggt cgtctacccc 120

cttccctcgt ctatctcgtc ctgcgtccgc cccgccgtag ttagctgctg cgcgctcgcc 180
 accatggcca gtgccggctc cctgcaacgc agaccgcgtg ggggctgggc gcatgtgtgt 240
 tcttgctcct agccgccgat gcccgctccg gcgagcagca gccccaccgc gcgtcnctgg 300
 cgccactggc cgtggtagca gccatggcat tgctctgcgc gcccttgac ctggccaaaa 360
 a 361

<210> 1500
 <211> 387
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F2

<400> 1500

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 gcgaaagtgt cgctgtcatt tagcgcgtcc tgaatggatt tgacctgatg ggctgatgg 180
 ctgttgctct tgatttgagc tcgaaggatg atgaaatggg gggctcaaca tcagcactcc 240
 cgcggtattcc tactacgacg taccgtcata ttgactgac ggtgtaccca agagcaagtt 300
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 tggctgtctt gatattgcct cagtcct 387

<210> 1501
 <211> 367
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F6

<400> 1501

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 ggcaagccga ccgccgacgt accaccgcgc caacccgaga gaaagagggg gaggatcatg 120
 acgatcctca actccgcgt cctcgtagtc gccgtctcgg tcatcgcagt gctggacccc 180
 aacgatgctg ccgtcgccgg tgaccaagac gactccgact catccgtatc agcaggtacc 240
 cgtcacaggt gcaccgaggg gtctgccgca agaacaggtt caggatcagg gctggcagca 300

cactatgtcc tccaaactct cacgctggat ttagtcgcga tcgtcgtctt gctattggct 360
cagttcc 367

<210> 1502
<211> 383
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G10

<400> 1502

gacccttccc gttcgttcga ttcgttcttt ccgccatgga ggctcggagg aagcccgcgg 60
tgtgctgtgc ctttcttggt ctgctcatcg tcgcctccag cgcaacgggt tcgactgctc 120
atgacgagag ctgctggaag gacgacgacc accaccctat ctgctttccc gaagactgcg 180
tggcgacctg ccaggatcac ggccacgcgg acggccgctg caactgggca tggtcgtgga 240
ggccgtattg ccagtgcctg ttggcggact gccaatagga gcgaacagct gcgtcgcgat 300
gcgtcctggc tgccctgccg gccgatgaag gatgaacggg tcggggccgat gatcgatgtg 360
tccgtcggca tgcgatcac tca 383

<210> 1503
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G12

<400> 1503

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ctggagcaga tcgctgagac agagcgcttc atggtgaaga aacaggacgg gctgggtgaag 120
ctgcaggggt ccaagcaagg gaggaagggg cagctcgcga tcgacgccga gatcttcgag 180
gtgacaccgg cttttcacgt cgtcgaggtg aagaagtcgg caggcgacac gctggagtat 240
gagatgttct gcagcaaggg cctaagacct tcaactcagc acatctgctg gagcagccga 300
tctgaggaga acatggctcc ttcagtgggt cagccatcac aattggagcc atcctcttag 360
accgtctccg acagtttact caccctctt a 391

<210> 1504

<211> 447
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-G3

 <400> 1504

 ggggtccacgc acgcgtccga ccacatcagt gcttgcgac gcgtcggcca cgatctcttg 60
 cgaaaaagct taccctgtgt ctgtctgtcc gaccgtcagt ccgtctaaca atcgatttcc 120
 atgacgacgt ccccgcgct gtggctgctc gccatggcac tggcgctcgc ctgctgctg 180
 ctgctgaggt ccgccgacgc tgctgccgag gcgtccccga ctccaggcgg ctccacctac 240
 ggggtgcaacc cggccacgga caagtcgtgc aagcccgagg gcgtgggggt ggtgctgccg 300
 ggcgggcgga tcgacctcga cggcgacggt gacgaggacg agctgccgca attccagccc 360
 cacctcatga tcctcggcca tggccactga tgagtgtaaa tggttgggtg gttggtcgtc 420
 ctcagccgat ctactgtacg acacgat 447

<210> 1505
 <211> 357
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-G4

 <400> 1505

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 gaggaaaaag aaattcattt aaatgctaga gccaaaaatt gcttgtatga atctctcagc 180
 atggatatatt ttaatcaagt atttaccttg agaactgcta atgaagaagc taatttattt 240
 aattaataaa gatgaataaa acgaagatac aaccagttgc acttcaggaa gatgtgccat 300
 aacttgacaa ggctcccgaa ggtgaccaca caaaaaaaaaa ggggggggccg cctcaaa 357

<210> 1506
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-F12

<400> 1506

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tccggcaaca agatcagcgt ggccttgctg agcgtggccc tagtgggect gctcctctgc 120

cacctcgcca ccaccgcctc cgcccaccag aaagacatcc acgtcctcgg cagcgtcgac 180

ggctccagcg acggcagcag ccccgagtcc gaaggccgcg tcgtctacgc ggacatgaag 240

ctggctgata cggaatccga tgcgccggcg ccggcgccgg cgccggggcc gtcgtccggt 300

tgaactgaga agcgtgctgc cagccaagca aggtgggtcaa aaccgagaac taattaagg 360

ctcgatcgtg tgtcaggcta ctactgttct tgccataatt atatatagat ac 412

<210> 1507

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D9

<400> 1507

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ttcctccctg gcatggagga agtagctgtt tcgcctatga tcgttgccgc cgtagtgctg 120

gacaacaatg gcgctgacgc ggtctcctgc actgccatcc ctagecgtaac aataagccta 180

gaggagaaag aaaatatcaa tggggatgtt cccacgatca cctcggccgc aagcaacgag 240

gaggaggcgt tggtcagtgt cagagaatcc accaatgacg atggccatcg cttgacgatg 300

gaatgctcca ctccgtctc ctccagtagc cttccactc gcaagaagcg cggggcgttc 360

agcctettca aggcgatgtt cctgtccttc ggccggagcc acgac 405

<210> 1508

<211> 282

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E11

<400> 1508

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aggcagcgca atcaaggcct gccgctgagg agacgacgac gactccttcg tcaggcggcg 120

ggggttacgg cggtgcaacc ggcaaggctt cctcaggcgg cggcgggctg gaccccgacg 180
gcgaccacaga ggttgggctg aacgggaagg cgatcgagga gatcgtgaac gagcacaacg 240
tggtccgcgc caaggagcac gtgcctcggc tgggtgtggaa cg 282

<210> 1509

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E2

<400> 1509

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cgттаagtgg acgggaagaa gcgcaactgg gggcaaattg tgcaaaccgg gaagacccaa 120
ctgcgagtca ctgacgttcc ggggatgac cagcgaccac cgcaaggcca cctcatggca 180
cgттtcccc gctgactgga agttcggcgt cacgtaccag gcgtccaaga acttctaagt 240
agccactttc cctcctcttc ttcaacctgc atgccagcaa gcagccatac ggatgataac 300
atgcatcatg catgcatatt cattctttcg ctcatgcact ccgatacggg gccggagtta 360
aaaaaaaaatg taaatcaatg tgcaaattca aatgacatcc taaccagttg tgatcaa 417

<210> 1510

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E3

<400> 1510

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cgcccttttc caacatccac agggggaaca ggaaaccacc ggcaatggcc tcaattccgg 120
caacaacctt cgccgtcatc taaccctgct tcttctgtgc cgcggtggc accgccgtcg 180
acaacgacct ccccgactac gtcattccagg gccgcgtcta ttgcgacacc tgccgcgccg 240
ggttcgtgac caatgtcacc gattacatcg cgggcgcca ggtgaggctg gattgcaagc 300
acttcggcac cggcaagctc gagcgtcca tcgacggggg gaccgacggg aacggcacgt 360
acacgatcga gctcaaggac agccacgaag aggacatctg 400

<210> 1511
 <211> 370
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-E4

<400> 1511

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acattcacia ggaggaaaat gaactcaact ggcagtgaac tctagtccag cgaatgacta  120
tcgcagtaaa cggggcggtt cccctacagt ttcaaagctg agatcacctg caaggcaact  180
caagaccctt tcaataagca tcacaaacat caattcatcg ccttgcatth aaaaaatcct  240
gaccagggaa acacccttgc gtctccact ttaacgtgct gtcagaaaac ccccttttcg  300
caaccgggga taactcatac atggcccacc aggtttcccc tcccaaaagc ttgtacaccg  360
taaagggtcaa                                     370
  
```

<210> 1512
 <211> 267
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E8

<400> 1512

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cggtttcttg tgtgggtggt gatcggtgaa ggaaggggaa cttaagatca ccctcttcgg  120
gcttgggagg caatctcaga agacattcag gcctaagaac gatgcaccgt ctggcaacia  180
ggctgtgcac ctgacgaatc acattcgtct aaccttatga agccggactt tgaggtatgc  240
tgtccgggtg ccaccagggg acgatct                                     267
  
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<210> 1513
 <211> 363
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F1

<400> 1513

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 aaagcgactc tgagcgggtga ccggagtgat tacgccatcc catttggaga agaacatgtg 180
 gtccaagtgg agccacatat caaggagtgc gatttgatct aggtggcgtc tcccagttga 240
 ctttctgacg ccaaggatgg atttttagatc ctgttatatt tatcttttat ttttgtaaga 300
 cttccgctat gtaatatgta ctctgattat attgtgacat ttatctctat acactctgtt 360
 att 363

<210> 1514
 <211> 330
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-F11
 <400> 1514

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 caacgaacgg tgggcaagat gacgaacaat aagccctctc tctctctcgc cctgggggtcc 120
 gcgctccttg gtgcggcgcc ggccgccgcg aacgcccccg gccggggcgtt cagcaactgg 180
 gtggcgatga accagcagag ctacgcgctg tacgcgcaga aatccgtcgg ggaacggggc 240
 aaggagcccc tggacaagaa gctgtcngag gccgagaaga agaagggtcac gtacgtgggtg 300
 gaccccagcg ggcaagggca ctacaccaac 330

<210> 1515
 <211> 337
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-013-Q1-E1-C6
 <400> 1515

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 ggcccagcgc gctgatgcca atgccacctc cagcgtctcc gatctaggcg gatcagctag 180

cggtggcgcc gctgcgcttg tggcgctgga tgaccatctc gatgtcagat tgtcaattgc 240
gtccccgttat ctgatcatga acccttgact gggcatgacc atcgtcgact agttcatcca 300
tcttcaggga ctatctcatt gttcagcacc attccct 337

<210> 1516

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C9

<400> 1516

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tcctcgggccc tcttgctcct cgtcgcgggc ttgggtggcca ccagtgcgag ggcgggccaca 120
ttcaccatca ccaacaactg cggctcgacg gtgtggcgcg cgccacccc ggtgggcggc 180
ggcacgcagc ttgaccccg gcagacgtgg accgtggacg tgccggcggg gaccagttcc 240
ggcaggggtgt gggggcgcac ggggtgctcc ttcaacggcg gcagcgggag ctgccagacy 300
ggcgactgog gcggcgact ctctgcacg ctctcggggc agcctcccat gacgtggcc 360
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<210> 1517

<211> 405

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-D11

<400> 1517

aattcntagg ccgacccgac ccgtcaggcc ccctaacgtc cgtgcccacc accctcgctc 60
gtcggcgctg tccccctctt tctctctcct gtgccccggc caagaaggca aggctgcctg 120
ccgactgggt ggacctggac gaaggaggac gagaggctcg ctcgtcgctg gcggttggtg 180
cgtgcgcgcy cgatggacag gggaacgggtg gaggacctca tacggcggtt gctggacggg 240
aagaagcaca aggcgacggg gaagaagggtg cagctgaccg agaccgagat ccggcacctc 300
tgcgtcaccg ccaaggagat cttcctctcc cagcccaacc tcctcgagct ggtggccccc 360
atcaacgtct gcggtgacat ccacgggcag ttctcggacc tgctg 405

<210> 1518
 <211> 456
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D2

<400> 1518

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gggtcgagcc agcgtccgaa cacacgtccg cccacgcgtc cggccggagc gacgacagca    60
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acgattgcaa gcctgccgat gacgagtcaa cgtcgtggaa gcgcctcgtg gacggtatgc   180
gcccgtccg cctccgctgg cagctggagt actaccgcc gccaccgcc ccaccgccgc   240
tgggccacgc cgatgtgtac catgacgtga tctcccgcc gccgtcgag gcacggttcg   300
gcttcgagat caaggaggtg ggcattacca gccgtacgc gtccgctgag gatctgcacc   360
agatggacag cgaccaggaa aaaggggtgct gaggtggcg atgacggtga cagcagttgc   420
ccacacgcca tcgacatgca ggcggaggag ttcac                                     456
  
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<210> 1519
 <211> 353
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D3

<400> 1519

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agtgccccg ggagcaggtc agcctgccg actggggcat gactggaag cgcaagggcc   120
tcacgagaa gatcatggac cccaagctcg ccggcacctg caaccggag tcgctcgcca   180
agttcgccga gaccgccgag aagtgcctcg ccgagttcgg cagcgaccgc atctccatgg   240
gcgacgtgct gtggaacctc gactacgcgc tgcagctgca ggacgccaac ccgccgatg   300
gcgcgcggca tggcggcgac ggggacgacc aggacggcgc cgcggcgcg ggc          353
  
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<210> 1520
 <211> 429
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D4

<400> 1520

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cgcgcggtg gagccaccgg cgaagagcta cgtgatcgac gtgaaaccgg gcgtgaagtg 180
catcggcttg caggagggcg agtggcccgg cgtgtcggtc atcggcaaca tcatgcagca 240
agagcacctc tgggaattcg acctcaagaa catggaggtc aggttcatgc agtcgacctg 300
caccgggtga tcgtaaagct gacctcgatg gttttgttca gagcattcca aggggaaatg 360
ttttttctga acataaaaaa atagaaaacg aaaatgatgc tctgcataaa tcaactttct 420
gcacgagat 429

<210> 1521

<211> 454

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-B1

<400> 1521

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tcaaggagac cgggagcttc tccaagaact tcacgccagg tggcaagtca tcagacaagg 120
gtgaactgac aagggcccca agcaagctgt cgtctgcatt ttctggtacc caggataagt 180
gcgcagcatg ccagaaaaca gtgtaccgcg tggagaagtt aactctggaa ggcgagtcct 240
accacaagag ctgcttcaag tgctcgacg gcggctgcat cctgaccacc tcctcttatg 300
ccgcgtcaa cggcgtcttg tactgcaaga tccacttcgc gcagctgttc atggagaagg 360
ggagcttaca ccacatgaac aagaagagcc cgtcncagga ggttctgccg gacgtggctg 420
acgaggagca accgccggaa ccagcgccac cgca 454

<210> 1522

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B10

<400> 1522

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tggaaaggct gggcgactac ctgcttgaac agggcatgta actactacgt accagctgga 120
atgcatgtcg acgacgatgg tttcgagttt cgacttccaa taatagtaac aacaaagcaa 180
aggccttcct cccggcgat tttgctttggc tcttctcttc cagccataa gatatttagc 240
aattggtgac tcgccttaat tagttcgctt tgcttttgag gttgactcga ccattttgct 300
gtaacgtgaa ttgcatggac atgcaacgct ccaatggcct ttggaatgtg gaattttttt 360
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<210> 1523

<211> 377

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-B11

<400> 1523

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tctcggcgcc ggtcattggt tactctgtcg acagccatga ttattttctc gtcaagagct 120
tacaatgtct tgccactcat cncgatctgt aaacanatga tcaatgatcg tgcggccgat 180
ccgttccttc atttggtgga tgagagcaga cttacagctg ttaaggattc ttcaaatgat 240
ccttcaaaaa tatatggatt cacagaggac aacaataatg cactgaagtc cttttcagaa 300
atagaactat cagaaagtca atctcgagaa tgcatagtct ccacaatcat gaacaacatc 360
gcaaatatgc tggatgc 377

<210> 1524

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B3

<400> 1524

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ataatcagcc acctgaagaa aaaaatgcct gcactgatgg gcaaggccaa ggcccagcaa 120
aagctgctcg acgggctgga tcaaaagtcc gccaaaggctc agaaggagct gcacctgccg 180
ccaggggact tcccagagcgt ggaggagtac agggagctcc tgagcgccta caacttcgac 240
aggttcgaga agctgaggcc caagatggtc cagggcgtgg acgacatgct ggcctacgac 300
atcccggaacc tcctgaagaa attcaagaac ccctacaact gaagccggaa accaatctct 360
ttgctcctcg gggaagggt 379

<210> 1525

<211> 352

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B4

<400> 1525

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ggattttctt tttgcgggca ccctccgctc cccctcaccg ccctgccgtc agccgtctcg 180
ttttcggatt cgtttgctcc ggcggtggcc gacctgccgt gcggggcgcg gtgatgccgg 240
agggtggggca gtacgggtac aagaagaccg acggcatctg cgacagcgtg tcgggcgagc 300
ctgtgttcac gacagctctg acgatgtcaa ggctacagtg cgctctccgg gg 352

<210> 1526

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B9

<400> 1526

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agcgagggac aacgaccgac cgaccgacca gctcgagggtg aatgaacagc cgcataccgt 180
tcctccagaa aatgcaccgc tggatcatcc ctagctgcgg cgacaccgc cagccgcgcc 240
cttcctcccg ccatcgagat gcgttcccga ggccggcgctc ggcgtcggcg tcggcgctcg 300

cggccccgtc ccctcagaag ctgaggaagg tggggtcgga ggggacgctg gtgctgtccg 360
tgcccaagga cg 372

<210> 1527
<211> 410
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C11

<400> 1527

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tcggcctcct cgtegccgcg gctccctcgc ccgtcgcgct ctcggatggc ggcgggatgg 120
cggcgccggt gtacgggtac gcggcgggga gccccaacgg gccggagaac tgggggaagc 180
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ccaagcaggc cgtccccgcc gccaccctcg acaccctcaa ccgcacctac ggcgccacca 300
acgccacgct catcaacgac ggccacgaca tcacgctggc gtcgagggc aaggttggga 360
cggtgacggt gaacggcaag gcgtacagct tcgagaagct gacttggcac 410

<210> 1528
<211> 381
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C12

<400> 1528

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gcggtggcca cgatgacgac taataagccc ctctctctcc tcgccctggc gtccgcgctc 120
cttgggtgcgg cgccggccgc cgcgaacgcg cccggcgggg cgttcagcaa ctgggtggcg 180
atgaaccatc agagctacgc gctgtacgcg cagaagtcgg tcagggacgg gggcaaggag 240
cccctggaca agaagctgtc ggaggcggag aagaagaacg tcacgtacgt ggtggacccc 300
agcggaagg gcgactacac caacatcacc gcggcgctgg aggatatctc ggtgagcaac 360
accaagcgcg tgatcctgga t 381

<210> 1529
 <211> 306
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-H2

 <400> 1529

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 cccaaaaaac ccaaaatttg gtggtggctt cggaggaatt ttggaaggaa ttggaaatgc 180
 caaaaccgga actgttgccg gcgttccaat tggaggatcc tccggtggcg ccgatgctgg 240
 cgctggcgct accgtangtg ctggtgtctc gggaagcgct aaagttggtg gtggcgttgg 300
 aggaaa 306

<210> 1530
 <211> 324
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-H3

 <400> 1530

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 aggctaaaca aatacggagc tacccttcag aaaaaaaaaag aaaagaaaga aattgaaaac 120
 cagggaaaaa aaatggaact ggcccattga ggaagcttga aaaccattta acaagaattg 180
 ccaacatata cttggacaac cttgttaaca aagtttaaaag gtttccaagc aaaaaaacc 240
 gcttgcaacc acaacattca tataattaat aagcaagggt tagaaaagag gcaacatggg 300
 caciaagatg aagaagggat tctg 324

<210> 1531
 <211> 397
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-H4

 <400> 1531

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 gctctcgccg cggccacgct ggcgctggcc cacggggcgc aaggaggagg accatcggca 180
 tcggcggcgg acctggacaa ggtcacggcc gagaccttct tggccatcga gatcgacggc 240
 aagcctgcag gccgggttcgt gctgggactg tttggggaca ccgttcctaa aacagcagag 300
 aacttccgag cactttgcac aggggagaaa ggaattgcc agtccggcaa gcctctgtgg 360
 tacaaggggt cgacgttcca caggatcatc ccgggggt 397

<210> 1532
 <211> 293
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H8

<400> 1532
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 tgtcaactgg gaagcgggac cctcgacaac ggggccaag taagctttag agctgaaact 180
 actttaagcc tacctatgct aactatacta gattgcgttg gcttccatat agtgcattat 240
 acatgcatgc atttggccct gatatcgatt tgcgaccact tacctaatac aac 293

<210> 1533
 <211> 388
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A10

<400> 1533
 caccggaaaa caagcaactt caacaacaaa agccaaaaca acttgcaatt attaattgcc 60
 ttccaaaccc taaggggtcca ccaataaggc ctgaaccaat tgcacccggc gcacgcattg 120
 gttcacaatc tgatgcagct acaatcataa aagcggctca ttcaaaaggc gcaatctaca 180
 ttaggcctgg ggaaataatc ccgaattacc tgaaaccact agcaccaaaa ccactttcct 240
 cggtaccacc gatgaacca gggcagctca gacgatttgg tgattctgct gtcaccaagg 300

atgcaatctt cggttcttcg gatggcacgg acgatgacga cgaagaagac actgatgacg 360
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<210> 1534
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 <212> DNA
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 <223> Clone ID: LIB148-013-Q1-E1-A11
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 cgccccattc ccagaggttt gcaactgccac agccggggcgc catgcatcca cttaccgcgt 180
 catcgaccat ttggccgtgc tgaacatgca agtggccgcg ttccccaagc gcacatcgca 240
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<210> 1535
 <211> 362
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-013-Q1-E1-A12
 <400> 1535

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 aattaatgga agaagcggca gcatggaatc aaccggccgc gctccttggg gcaaccctc 120
 gcgctagtgg ctgccaccgc cccacaggta gcggaggcaa agaagaagag agcggcggag 180
 agcggcgagg cggcggatgc gaagaagatc caggacgact tctgctcgac gctgtgcgag 240
 ggcaagaagg ggacggacct ggtcgtgtgc aaggagtect gcgcgctctc ccagcagtc 300
 aacctggtgc tgtacggcag gattcagtgc aaggggcaat gcaccgagca gaagggcatc 360
 ac 362

<210> 1536
 <211> 341
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A2

<400> 1536

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atgaagaagg tccctggccc cgtcttcccc gccgcgccc tcggccaagg ctgggtccacg 120

cgggggcgag cgcttcgct ggccccaagt cctcttccat gcatecttca tcgggctgga 180

agtgccggc atccaccata ccacctacaa ctccatcatg aggtgcgacg tggatattac 240

gaaggacctg ttcggcaaca tcgtcctctc cgggtggcacc accatgttcc ctgggatcgc 300

tgacaggatg agcaaggaga tctactgcctt ggctcccagc a 341

<210> 1537

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A3

<400> 1537

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gattacttga ggacaaattt aaggtcggta agaaactgcg gggaatggac attgcaagat 120

gtggtgtggt ataagatagg caaaatgtgt gattatTTTT tgtccgaggt tatcaccccc 180

cttggcccag acaagatgat aagatgtcaa tgtaacaagc cgtctgagct tctgtaagta 240

aatgactgtt gctgcatgcc ccctgtgtac atgtagctgt ttgagcagaa ttccgtttgc 300

atgaatcgtg tgatcaccag ccagggatc 329

<210> 1538

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A4

<400> 1538

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gaccaactct tccgtggaga agagctgcga gctccccgat cggcaggtca tcaccatcgg 120

tggcgagcgc ttccgctgcc ctgaggtcct cttcgagcca tccttcatca ggatggaacc 180
 tgccggcatc cagcacacca cctacaactc catcatgaag tgcgacgtgg atattacgaa 240
 ggacctgtac ggcaacatcg tcctctccgg tggcaccacc atgttccctg ggatcgctga 300
 caggatga 308

<210> 1539
 <211> 427
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-013-Q1-E1-A5
 <400> 1539

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 gtcacctacc gccgggtggg gcgcaacgtc ggcagcaact ccagcgcggt gtaccagccg 180
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 gggaagcagc agagcctggg atacgaaatc accatcgagc tgtcaggcaa cccggtgatc 300
 gtggattcca gctactcggt cggatccatc acctggagcg acggcgcgca cgacgtcacg 360
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 gctgttg 427

<210> 1540
 <211> 411
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-012-Q1-E1-H12
 <400> 1540

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 ggagagctgc atttgttttc ccattgtcgt ttttgtccaa cctgacaaag aagtctccat 180
 tggagaaaat aacatttaga cagcaaattg taatatggtg ggccggactg atgagaggtg 240
 ccgtctccat tgctctcgct tacaacaagt tcacgagatc tggacacact gagctgcacg 300

gcaacgcgat aatgatcacc agcacgatca ctgtggtcct gtttagcact atgggtgtttg 360
ggatgatgac gaagccattg atccggctgc tgctccctgc ctgcagcaac a 411

<210> 1541
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F9

<400> 1541

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ctacggcttc ttccacgtgg tgaacaacga ctacacgcac tggatcatgt acgccatcgg 120
cggcaacatg aacccaccca tcatcagcca gggcaaccgc ttcacgccc cgcacgaccc 180
caacgccaaag gaggtgacca agcgggagta cacgccgtac aaggactaca tcgagtgggt 240
gtggaagtgc cagggcgact tcatgatgaa cggcaccttc ttcaacgagt cgggcggcca 300
gaacgagcgc aagtagaca ggttcgactt catcccgcc aagcacggcc gctacgtcgg 360
tcagctcacg cacttcgccg gactactcaa gtgcatcatc agccagccgt gctactacac 420
atcgccccgg tc 432

<210> 1542
<211> 389
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G10

<400> 1542

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gtccctgtcg tcgtcgtcgt cgtcaacgaa tccacacaag gaaaggatgg agaagaagcc 120
gaccatcctc atgaacaggt acgagctcgg gcgcacgctc gggcagggca ccttcgccaa 180
ggtgtaccac ggccggaacc tcgctccgg cgagagcgtg gccatcaagg tcatcgacaa 240
ggagaagggtg atgcgcgtcg gcatgatcga ccagattaag cgcgagatct ccgtcatgcg 300
cctcgtccgc caccccaacg tcgtgcagct gcacgaggtg atggccagca agagcaagat 360
atacttcgcc atggagtacg tccggggcg 389

<210> 1543
 <211> 420
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-G12

<400> 1543

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 atcgtgcatg gtgagaagga agagtcaaag ggcacgatg cgaaagcgtc cgggcctggg 120
 gggtccttcg acatcaccaa gttgggcgcc tccggcaatg gcaagacaga cagcacgaag 180
 gctgtgcang aggcattggg atcggcggtg ggcggcactg ggaagcagac aatcctcata 240
 cccaagggtg acttccttgt cggacaactc aacttcacag gcccttgcaa gggcgacgtg 300
 accatccaag tggatggcaa tctgctggcg accacggacc taagccagta canaggacat 360
 ggtaattgga tcgagattct acgtgtggat aacctgggtc tcaccggcaa aggaaacctt 420

<210> 1544
 <211> 458
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G2

<400> 1544

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 gggggcgggc ggctcccggg gaacctccgc ccggcaaacc tcggccaacg gttgctcagc 120
 ccttcgggca acttcggccc gggctccgac ttctccaact tcaagctgcc ggcaactttc 180
 aaccggccca agtcgcagct gcagctgtac ggcgaggccg tgtactgagg cggcgaggac 240
 atgctggcgc ggtgcgcgcg cggcgccgac agcctgcagc gcatgtgcgc cgtggtggcg 300
 tggagcatct ccaccacgag gccccccatc ttgggttcg cgccctacaa cccggtgctc 360
 ggggagacgc accacgtctc cacgcccgcg ggcctcaacg tgctcctgga gcaggtctcg 420
 caccgcccgc ccgtgacggc gctgcacgag acgcacgc 458

<210> 1545
 <211> 419

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-G4

 <400> 1545

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 ccggtccgcg cccacgcggg ttgcgcagga cacggtggtg ctccccgtgg acaacgccgc 120
 ggggttcccc ggcgcttggt ccatcatcag cgagaacgcg ggcgtgtccg cgatgcacct 180
 ggtgatcatg cggagcgcaca aggccatcat gttcgacacg gtcaccacgg ggccgtcgct 240
 gctgcggctg cccaagggga actgccgcct cgatctccgc agcaagcagg tcggcgccaa 300
 ggactgcgcc gcgcacgcgc tcgagtttga ttacgcgcaca ggcggtgtca gggccctcaa 360
 ggtcttgacg gacgtgtggt gctcgtcngg cgcgctcgac gccgagggca acctggtgc 419

<210> 1546
 <211> 462
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-G7

 <400> 1546

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 gctgctcgac tacgccatcg acgacctccg gacgacgttc gacaggctcg gcggcttcga 120
 gatgaccaac ttcaagagcg ccgtggacga cctccggacg tggctgagct ccgcgctcac 180
 gtaccaggag acgtgcctgg acgggttcga gaacaccacg acgcccgcgc cgggcaagat 240
 gcgcaaggcg ctcaacagct cgcaagagct gacggagaat atcctggcgc tcgtggacga 300
 gttctccgag acgctcgcca acctgggcct gccgagcttc cagcgccggc tcctcgcgga 360
 gcacgctcgc ggcgcgccct cctggatgcc cgacgccaag cgccggctgc tgctggtctc 420
 ccccgcgac aacggcttca ggcccgacgt gacggtggtc aa 462

<210> 1547
 <211> 190
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H10

<400> 1547

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ttgtgtacaa caaatgagta catgtgtaat ttttcattac aggtgaaaat ggacacgggg 120
tgtcgcgaaa tagggctcaa ctgagattta catttttaaac gcgtatatgt gcatcatcac 180
agggacacgc 190

<210> 1548

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F8

<400> 1548

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ccagcttgct cgccgcgccc gtccttcttc ctgcctccg ttccgttccg ttccgtcgcg 120
cccgcgcgcg ccgcgcgatt cagggatgga gatgaagaag atcgccctgcg ccgtcctcgt 180
cgccgcctcg gcgccaccg tggcgctcgc cgcgagggt ccggctccgg gccccaccag 240
cggctcctcc gccgtcgcgc ccgcgcgcg cgccgcctc ggggcgcgcg tcgcctcgtt 300
cttcgcctac tacattcagt gagccggccg cagtcggtcg cccggaggcc gacgaagaga 360
cgattcggga cagagagtga catggctgcg cgcattccga tgcgtgggca tgtttttgat 420
tcgacacacc ttttgtcttc gttttc 446

<210> 1549

<211> 345

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E5

<400> 1549

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cccggtggtc atcacatttc tcacacttcg cgccacctc tcattctcggg gtactgggtca 120
cgctcctggt taaataatgt tgtcttctgc agttgaattt gcctcgtcat ctgctcacat 180

cacttcgtca gtttctattc gagatgacga ggtagctgat ggataggcgt tcatagaagc 240
tcttacatac gttaattgtg tgtcgcactg ttatggctat catagatgtg tatagacgat 300
tgacaatgat aagattgggc acttctcctg ttacggccag tactt 345

<210> 1550

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E9

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acgcggcgcc agggtcactc agcaacacct tcaatgccgc cggactgtcc aagtactggt 120
tccccgaggc tcaaatgcct agccctagta agggcgggcg tgactggccg ctgctcaggg 180
acatgatcgc cgataaccac cggctcatcg tgttcacatc caagaaaggg aagcagggga 240
cggaggggct cgcgtaccag tgggactacg tcgtggaaac ccaatacggg agcgagggca 300
tggcggatgg cagttgccca aagcggaccg agtcgaagcc catggactct aaggcccagt 360
cactagtgtc gctgaacttc ttcaccagca acccgagcca aagctggggc tgcagcaaca 420
actccgcgcc gct 433

<210> 1551

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F10

<400> 1551

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gcgtccggca tgagctcgct ggcatacttc ctgtccaaag acacgataga tcacttcaac 120
acgataatca agcccatcgt ctacctctcc atgttttact tcttcaacaa cccaagggtca 180
tcgatctggg agaactatgt cgtccttctt gcgctcgtct actgcgtgac ggggattgga 240
tacaccttcg ccattctctt ccagccaagt tctgcgcagc tgtggtcggc gtccttccg 300
gttgttccaa cctgatagc aaccagcaa aaggacacct tcatcgcaaa cctgtgctac 360

acaaagtggg ctctg

375

<210> 1552
<211> 417
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-F12

<400> 1552

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tggatcatcac cggcaaggga aaccttgacg ggcaggggccc agctgtgtgg agcaagaact 120
cctgcaccaa gaagtacgac tgcaagatcc ttcccaactc gctgggtgatg gacttcgtga 180
acaacgggga ggtgtccggg gtcacgctgc tcaactccaa gttcttccac atgaacatgt 240
accggtgcaa ggacatgctg atcaaggacg tgaccgtgac agcgcccggg gacagcccca 300
acacggatgg catccacatg ggcgactcat ccgggatcac aatcacagca ccgtcattgg 360
cgtcngcgac gactgcatcc tcacgggcc cgggacctca aaggtgaaca tcaccga 417

<210> 1553
<211> 429
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-F2

<400> 1553

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gttctcaatg ggtctcctct caaacaggat tgggagggag agcctcaagg cgggggatca 120
tatctactcc tggagggcgg cgtgggtcta cgcgcatcac ggaatatatg tgggcgatga 180
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cgaaaccagc gacagcagca cagagacgaa cggcgtggta tctcctgtc tcagctgctt 360
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caaagcgcg 429

<210> 1554
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F3

<400> 1554

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cacagggggg acaggaaatc agcggccatg gcctcgattc cggcgacgac ctteggcgtc   120
atcttatccg tcctcttctg tgccgcgggt ggcaccgcgg tcgacaacga cctccccgac   180
tacgtcatcc agggccgcgt ctattgcgac acctgccgcy ccgggttcgt gaccaatgtc   240
accgagtaca tcgcggggcg caaggtgagg ctggagtgcg agcacttcgg caccggcaag   300
ctcgagcgct ccatcgacgg ggtgaccgac gggaacggca cgtacacgat cgagctcaag   360
gacagccacg acgaggacat ctg                                           383
  
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<210> 1555
 <211> 210
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-F4

<400> 1555

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gggggggtgg gctgccttcc gagaaatttg ccccggggag atcgtccttg ccctcttcga   180
cttgcatttc tggtagaccg ggtttatattt                                     210
  
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 <211> 436
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-F5

<400> 1556

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 gtccgggcct ggtgggtcct tgcacatcac caagttgggc gcctccggca atggcaagac 180
 agacagcacg aaggctgtgc atgaggcatg ggcacggcg tgcggcgga ctgggaagca 240
 tacaatcctc ataccaatg ggcgacttcc ttgtccggac aacctaactt aacacgcctt 300
 tgcaagaggc gacatgacca tccaggtgga tggcaatctg ctggcgacca cggacctaa 360
 ccagtacaag gaccatggta attggatcga gaatctacgc atggataacc tgnatcac 420
 cggcaaggga aacctt 436

<210> 1557
 <211> 463
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F6

<400> 1557

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 gcgggtcgtg cgggcccccg aagggtgccg ccggcccaa catcaccacc aactacaacg 180
 gcaagtggct caccgccagg gccacctggt acggtcagcc caacgggtgcc ggcgctcctg 240
 acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcacgacg 300
 cgtgcggcaa cgtccccatc ttcaaggacg gcaagggctg tggctcatgc tacgaggtga 360
 gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgttcac acagacatga 420
 actacgagcc tatcgtccc taccacttcg acttgagcgg caa 463

<210> 1558
 <211> 466
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-E4

<400> 1558

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gactcccca ggggaaagaa tgggtcaacc aaaaggcaaa acaaaccaaa tttaaaggaa 120
 ttcaaacca aaaattgcaa ggcgtataaa gaaaatcaga aggaacctgt aacaatgatg 180
 gaaggatctc cacctgatgt tgggtcaagat ggtgatgatg agcaaggat tgatccatct 240
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 cttgctgcga agagtccttt ctttttcaag cttttctcaa acggcatgaa agaatcggac 360
 cagagacatg caacccttag aaatactgac tcagaggaaa atgccctcat ggagctttta 420
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<210> 1559
 <211> 456
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-D2
 <400> 1559

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 gctggtgaag tatgtggcgg acgacggcga catcgtgctg atggaaatcc aggacaagtt 120
 gtcggctgag tggaagccca tgaagctctc ttggggcgcc atctggagga tggacactgc 180
 caaggcgtc aaggggccct tctccatccg cctcaccagc gagtccggca agaaggatcat 240
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 cagcaagcta attaagttgg cagcatgcac cgctaacctt atatactact gagacttcca 420
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<210> 1560
 <211> 258
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-012-Q1-E1-D6
 <400> 1560

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catcgatcgc ggatgtggca acagcagaaa cttatcagcc atggggaagt cggcgtcggg 120
gatggtcgtc accaactagt ggatgctcac tttccaggag ctcaaggcga agctcaccat 180
ccggttcacg acattctcca tcaacgatga catcgaccaa gtcgctcgtcg acacgatgtg 240
gcaacccggc gacgtcta 258

<210> 1561

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E12

<400> 1561

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gaaaagctgg ttaatgagaa gctgcacagc ctgcatgggtg tggcaacaag gtgcaatgat 120
cctcagctga tagacttcat cgagagttag ttcctcgagg agcaggtgga agccataaat 180
aaggtctcca agtatgtcgc gcagctgagg agagtgggca acaaggggca cgggggtgtgg 240
cactttgatc agatgctgct tcaggaaggg gcctgaaggc caacaagggt ggcgtggacg 300
gagctgagct ctgggtgtgt tattttcttt tctttccagt tggttagtgt tttagtgtga 360
gaacggtgtt gcgttgccca catgacatga tggatg 396

<210> 1562

<211> 430

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-E3

<400> 1562

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cgcttggtca accccatcgt caccctcaag gccgatggct catctccac ctctggcaat 120
ggcgtcgcc tgatcagctc caccaaccaa gatgaacttg gagcgttatg ccaacagatg 180
cactacaaga cgttgtgctc cagcatgacg aactgctg nggtgactac gccagagcaa 240
ctcttagatg catccctgcg gattacagcg gtgaaggcag cgatggcgga gatgaagcta 300
gacaatgcaa taaaatcagg cagtgtcaa ggtaaccgga tgatgtcgtc gctaaagaca 360

tgcaaggaga gctacgcgtc gctggtaaac tccatcaata ccacgcggaa cacgctcaaa 420
agcggcggca 430

<210> 1563
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C10

<400> 1563

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gtaagaagtc gtctaattct tggatcgaat tagacgactt cttcgtccct ctcttcatta 120
gcacgctaac ttgtaatctg caggatctaa gcaaagactt gatttagtta tggacggatt 180
ggtaggcctc ttgaaagttc gcgtgggccg gggatatcaac cttgcctacc gcgacgcaag 240
aggcagcgat ccgtatgtcg tctacggct tggcaagaag aaactgaaga caagcgtgaa 300
gaagagattc gtgaacccca aatgggaaga agagctaact ctgaacgtca cagattccaa 360
ccaaccactg aagctggaag tgttcgacaa ggacaccttc agcagagacg aacccat 417

<210> 1564
<211> 459
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C3

<400> 1564

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acggaggtgt cggcgtgtc cccgcgcgtg gcgttccctg accaccagcg ctcgctgctg 120
acgctgggga acagccacct gaggcagcgg atcgcggcgc tcgcgcagga caagatcttc 180
aaagatggtg accgccattg ccggccgccc ctgctcctcc cgactacgac cctcgccgct 240
catcaggagg cactgaggaa ggagatcgag aggctgaggc aaatctacca gcagcagagc 300
ctgaagagcg gcagggagcc cgacgcggcc ccgtcggtec gcgacgacaa ggacatgac 360
ggcagcgagg ggaccgccgc ggccgggccc gccctcgtga tgaggaggag gtggtggggc 420
gacacgtcca gacatccgag tcggtcgtg tagtcgggg 459

<210> 1565
 <211> 399
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-C4

 <400> 1565

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cgtcgcctat cgcgaaact acttctcgct atttgctgtc gagggagggt aggaaacgaa  120
tggtgttcac gctgtcgga aagacactat cttcatgct gataaagggt actgacggaa  180
gagactgttc ctgcgatta atacttttcc tgatcatcaa gacgaaatta ggaaggatat  240
tcacagctt aggcacatct actatcatca tcacctgaga cacagtatga atgccaactc  300
ggatctgtct gtccgcgaca tctggacatg attctaagcc aggggaccgt cttgcccagt  360
taacttcctt gatgaagatt aggtagtcca actacatat                               399
  
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<210> 1566
 <211> 411
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-C9

 <400> 1566

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gatccagcac tcccgcgacc gctgccgct cccgctcacc ctcagggggg gcatcaatca  120
cagcggcgtc cgtaaggcg ggcccatctc cttcctccgc aaggagccgc tccccaactt  180
gcagcaagct gtcgcgcgc tacgacctct acaacgagac gtccgataat tcccaagcat  240
gcaaacaaac tttctctcgc tctctttttt tttaacaaaa acatcccata tacatatagc  300
acatttgttt ccgtttgttt atgcccgcat gcatgctatc agacatcctt cctaagaaaa  360
atztatgtta ttccatctc gcattatttt agtatctacc attcaagttt t                               411
  
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<210> 1567
 <211> 452
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D1

<400> 1567

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caccctcgag gtggagtcgt ctgacaccat tgacaacggt aaggccaaga tccaggacaa 180
ggagggcatc cccccagacc agcagcggct catctttgct ggcaaacagc ttgaggacgg 240
gcgcacgctt gctgactaca acatccagaa ggagagcacc ctccaccttg tgctccgtct 300
caggggagggc atgcagatct ttgtgaaaac cctgaccggc aagactatca ccctcgaggt 360
ggagtcctct gacaccattg acaacgtcaa ggccaagatc caggacaagg agggcatccc 420
tccagaccag cagcgggtca tctttgctgg ga 452

<210> 1568

<211> 312

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A5

<400> 1568

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caacgccggc cagccaagc ccctgacgcc tggcggggcg gtggtacacc acaaccacgg 120
taagttcacg gccggggcgt ggtaaccgc ccacgcgacc ttctacggcg ggcgggacgg 180
gtccggcacc acggctggcg cgtgcgggta caaagacacg cgcgcgcagg ggtatggcgt 240
gcatacggtg gccgtgagca cagtgtgtt cggcgactgc acggcctgct gcgggtgcta 300
cgaggtgcgc tg 312

<210> 1569

<211> 331

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A8

<400> 1569

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ctcgtatctc acttcattag cacgcgcacg tgtcatcggc aggatctaag catgtgactt 120
gagtgactca tgggtccgatt ggtaagcgtc ttgaagggtc gcgtgggtcat gggcatcaac 180
cttgccgaac gcaaagcaag agggagcatt acgtatgtcg tccgacagca tgtcacgatt 240
acgtgaaaag aaggcgtgac cgaaacatgc gtgcacgaca tcagggacca agacaaatat 300
ccgattggca tacatttttag tcaaacattg a 331

<210> 1570

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A9

<400> 1570

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aggtcccgcc cttttcctcc gacatccaca aggggggagg ggaaaacacg tacattcacc 120
cggcggaat aatggcctcg gttccgggtc cggcgacgac gaccgccgcc gtcatectat 180
gcctatgctg cgtcctctcc tgtgccgagg ctgacgaccc gaacctcccc gactacgtca 240
tccagggccg cgtgtactgc gacacctgcc gcgccgggtt cgtgaccaac gtcaccgagt 300
acatcgcggg cgccaagggtg aggctggagt gcaagcactt cggcaccggc aagctcgagc 360
gcgccatcga cggggtcacc gacgcgaccg gcacctaca 399

<210> 1571

<211> 313

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-B1

<400> 1571

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gtgggtccacc ccacgtcac cctcgaggcc gatgggtcat ctcccacctc tggcgatgg 120
cgtcgctga tcagctccac caaccaagat gaacttggag cgtttatgcc aacagatgca 180
ctacaagacg ttgtgctcca cgatgacgac actgcctgng gtgactacgc cagagcaact 240

cttagatgca tccctgcgga ttacagcggg gaaggcagcg atggcggaga tgaagctaga 300
 caatgcaata aaa 313

<210> 1572
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B12

<400> 1572

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 cagatgacat cgaagcgagg taggcacetc tgatctagga gcaatgtcgt ggtaagctta 120
 cgtgaggaag cagctgatat gtgacatcaa gggccagcaa ctcacggcgg cgacgatctg 180
 ctgccacaac tgattcctct gggagcagag catcgcgttc cccgacttca tgaccgaaga 240
 catgggcaac atcatgaatg acttcgacga gccagagcac ctcgcgccga catgcctgtt 300
 cctcggacct agcaagtaca tggatcatcca atggtaacct ggtgccgtca tccgtggcaa 360
 caacggatta ggatgcatca acg 383

<210> 1573
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B3

<400> 1573

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 cgtaccaccg ccaccgcagg agcgagatgg agatgaacag gatcctcttc gccgtcctcg 180
 tcgacatcgc cgctcgggc accgcagtgc tggcctccac cgaggccgcc gccgcgggcg 240
 ccccaactgc ctcagagtcg tccgccgagg ctcccgtggt cgctggcgct ggcgtgccc 300
 ctggcgccgc cgccgcgggg cctccgcca tcaacggcgc gcccgactc gcggccgagc 360
 cagctgcgct cctcttctcg ctctcgcct actacctcta ctaagcgtgt gcgtgctta 419

<210> 1574

<211> 447
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-B5

 <400> 1574

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 gcctccccctt cctctagcag tggcgaggca ggaaggcagg ccgggtgtcc tgcctccctt 120
 gcgcgcgcctc tcacgaccca tcccgctcgtg cgtcatcgag ctccggcgagg cggggccatgc 180
 acgcgtccag ctagctcaca cagcgcgcgtc tcgaccggct gccgggtgctc caccgggccc 240
 gcgtccacat cagggcgggc gggcgcgcgc gtgaacgggt tcctctccgc atgaccctgt 300
 gatggtcgggt gggttcctgc ggcgcggcca cagcctcgac aggtcctgt cggangcgcg 360
 ccgggccttt tcgccaagcc cctcgttctc gtctctctcc tccacgccgt cgtctccgcg 420
 tggcagcagc gtcaggagcg gcatgat 447

<210> 1575
 <211> 200
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-B7

 <400> 1575

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 gcttcgctct cagccttgctg caggccatcg ctgtctcctt ggggcggcat gctcactgag 180
 gagctgcggc tgtcaacctc 200

<210> 1576
 <211> 423
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-011-Q1-E1-H10

 <400> 1576

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 tcagaagcgt ccggggcccg tgggtccttc gtcatcacca cgttggggcg ctctggcaat 180
 ggcacgatgg ctatcacgaa cgctgtgcaa gaggcgtggg catcagcgtg ccgcggcacc 240
 gtgaagcaca cgatcgatcat cccaagggc gacttcctcg acggaccact caacttcaga 300
 ggcccatgca agggcgacgt gaccatccag gtgaatggca atctgctggc gaccacggac 360
 ctaagccagt acaaggatca ttggtattgg atcgagattc tactcgtgga caaccttgtc 420
 atc 423

<210> 1577
 <211> 454
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-H2
 <400> 1577

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 cgtccgcgt ccttgggtgg ggcgcggccg ccgcgaacgc gcccgggggg gcgttcagca 180
 actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 240
 ggggcaagga gccctggac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 300
 tgggtggacc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 360
 cggtgagcaa caccaagcgc gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga 420
 agctgttccc tgacatcagc aagccgttca tcac 454

<210> 1578
 <211> 431
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-H4
 <400> 1578

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 catggcgtga atcaatatag ttgccagttt gttaaattag tttcataaaa tgttgtgtc 120

tgaatttggga aattttccga gatttgttca ttgotttagtt gaactatatg aggccgtttc 180
 ttgggcggtg attcctgaag cattcacagg ttactataag aaagaaccat gacgtgttga 240
 tattttctatg aaatattgta ttttcatata atagtgttaa agcttctctt tgtctgtgaa 300
 tctataggca ggtcaatact tcgtcattaa tttgtaccg atttcttgtc attcatttca 360
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 aaactagtat c 431

<210> 1579
 <211> 425
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-011-Q1-E1-H6

<400> 1579
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 gacaccatgg ggagctcgag gaccatcgtt gcgtccccc tgctctcct cgccctcctc 180
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 caattccagc ggacatgcaa ccaggtgcac ttcaggaaga tgtgccagag cttgacgagg 300
 ctcccgaggg tgaccacgcc gcgcgagctg ctgctggcgt cgatgcgcgt cgcggcggag 360
 aaggccaggg aggccaagag ccgggtggac gagttcgcgg cgaaggaaca cgagggccgg 420
 ccgat 425

<210> 1580
 <211> 440
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-012-Q1-E1-A11

<400> 1580
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caaccactgc acaggatgtc gtggcagacg tacgtcgatg agcacctcat gtgcgagatc 180
gagggccacc acctgagctc tgccgccata gtcggccacg acggcgccgt ttggggccag 240
agcacccgat tcccacagtt caagccagag gagatgacca acatcattaa ggacttcgac 300
gagcctgggt ttctggcccc gatcggcctc ttccttggcc ccaccaagta catggtcatc 360
caaggcgagc ccggcgctgt catccgcggg aagaaaggat ctggaggcat aactgtgaag 420
aagaccggac aggcgctggt 440

<210> 1581
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G8

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aagaagagag cggcggagag cggcgaggcg gcggaggcga agaagatcca ggacgacttc 180
tgctcgacgc tgtgcgaggg caagaagggg acggacctgg tcgtgtgcaa ggagtccctgc 240
gcgctctccc agcagtccaa cctggtgctg tacggcagga tccagtgcaa gggcaagtgc 300
accgagcaga agggcatcac ggcgccggcc atgaaggctc gccaggagga gtgcgacaag 360
gcgtacgtgg tgaaggcggc cgaggtcacc aaggcctgca gcgtcacctg cgccaaggag 420
aagaacccgc gcctc 435

<210> 1582
<211> 433
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-011-Q1-E1-F3

<400> 1582
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tgccggttcc agctgccggc caccgacgac aagagctcat gcagcggcgg cgacggtggt 120
ttcgtcagtg tcgatgcgga tcgtgaaggc agtgacaacg gcgngngtga tggatatgga 180

agctctccgg gcaacgccga gctagctgaa gctgaagaga gtggcaggcg gttgccgccca 240
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agcagttcgc atcattggga gaactaagca atattgccat ggttgctgcc gcttgaaagc 360
ttggcccgtt ggttggtccc aatgtacata ngaaggagca ngagcatgcc gggttggtgc 420
catgtaaaaa tct 433

<210> 1583
<211> 329
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G11

<400> 1583

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gctggatcga attgtctcac gttaacaaca tcgggatcac cggcgcgggc acgctggacg 120
gccagcggac cgcggtgtat agcacgagga agaccgacaa cgtgaaggcg atgcccaca 180
cactggtgct gtttcacgtg atcaacgcca ctgtcgccgg aatcaaacta ctcaactcca 240
agttcttcca catcaacatc gacaactcag atagcatcac cgtgaaggac gtgaacgtca 300
ctgcgccccg cgacgttgag aacacggac 329

<210> 1584
<211> 421
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-G12

<400> 1584

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ccctgctgct ccacctgccg ccgctcggga gccgaagaaa gacaaagcag aatcggatca 120
ttcagactca tcgtcatctt cttcggacga cgaagaggac gaagaggagg aaaccgagga 180
gcaatgataa gggcatgcag gtgtgttcct aggcttcaga tgtggaaggc cggccacgca 240
gatgaatgtg gcttcatgca cctattctgt aaggagctca atatgtagac cgtggattaa 300

ttaatccttt gggggctagc tacatggtgt ggttgcggtt gcggcagtgt aaatttgagg 360
 tgttcataat ttttntttt tttgactgtc aacgggggaa aagctcccca cctggatttt 420
 c 421

<210> 1585
 <211> 329
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-011-Q1-E1-G2
 <400> 1585

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 ctcaacgacg acgcagtagt acatatggag aaagcggccg gcgtgagccc ggccaagctg 120
 gccctggccg ccgccgccgt gctgctgtgc ctgctgctgc tgctggccgc cgggccccaa 180
 ggggtctccg gcgccgacgg gaggaggaag acggcatccc cctacgataa gttgatcagc 240
 tgcanggtgc tgggcaactg cgacaagaac aaaggcccgg aggccacccg ccccggaag 300
 ccggtcaaca ggtacacccg cggctgcag 329

<210> 1586
 <211> 442
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-G3
 <400> 1586

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 tgctcttttc cagcccatgg ttatcttgaa ggggtggaatc ggatctggat acaagaagct 180
 catagaagaa aaaggtgcta tgggtgagac ttatactact gaaggcatag ctctaattcg 240
 agtatctgag acatctatct acaacaacaa gactcttcaa gtagatgcgg tagcaacgtc 300
 tttaaagctc acggagtctt tcgtactgca atctggaaat gctatgttta catggtttgg 360
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 tggcggtgca gtgaagcact gc 442

<210> 1587
 <211> 431
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-011-Q1-E1-G4

 <400> 1587

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 ctgccccaac aagttgtgta ctgccaacgg cgccctccaag gtcaccgtca aggatgtcac 180
 cttcaagaac atcaccggca cctcctccac cccggaggcc gttagcctgc tctgactgc 240
 caaggtocca tgcaccggcg tcacatgga tgacgtcaac gtcgagtata gcggcaccaa 300
 caacaagacc atggctatat gcacgaacgc caagggcagc accaagggtt gcctcaagga 360
 gcttgcatgc ttctagaccc tccatcgact gacccatctc tctagttata atttttctct 420
 cgtccttgca t 431

<210> 1588
 <211> 197
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-011-Q1-E1-E11

 <400> 1588

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 tctaggacat gttcgacctc atctatacca ggggttgta ttacgccgta gtcgatcacc 180
 atctattctg gtgcgct 197

<210> 1589
 <211> 444
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-011-Q1-E1-E2

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gactttcctg ctggttcctc atccctcagg gagagatttt gcattctttg gcattactgt 180
ttgatggcag acagtagtgc tccttctctg tggaggcatt ggggcaaaag gcagttgaac 240
tgaacgggca catcaatagt ctctggcctc caagggaaat tgggaaattc agattgaacg 300
tggctgcac atttttcctt tcatttgtct tttcagcaac agcgatccat tctcgtaggg 360
gggagagaga gagagagaga gggagagaaa tcaaagagga gagtgatcat ggagcatgtg 420
atcggaggga aatataagct tggg 444

<210> 1590
<211> 449
<212> DNA
<213> Zea mays
<223> unsure at all n locations
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<400> 1590

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gtacccgctg gagaagttaa ctctggaagg cgagtcctac cacaagagct gcttcaagtg 180
ctcgcaaggg ggctgcatcc tcaccacctc ctctacgcc gcgctcaacg gcgttctgta 240
ctgcaagatc cacttcgctc agctgttcat ggagaagggg agctacagcc acatgatgaa 300
gaagagcccg tcccaggata cgctgccgga catggcagcc gacgagcaac cgccggaacc 360
ggcgccaccg caagacgggg aaggagagga caactangan gaanggaccg ccaccaatat 420
atatcacaca cacacacaca cactcacac 449

<210> 1591
<211> 445
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-011-Q1-E1-E6
<400> 1591

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 gccgccgccc cattcagga tggagatgaa gaagatcgcc tgcgccgtcc tcgtcgccgc 180
 ctccggcgcc accgtggcgc tcgccgcgga ggctccggct ccggccccca ccagcggctc 240
 ctccgccgtc ggcgccgccc tcggcgccgc cctcggggcc gccgtcgctt ctttcttcgc 300
 ctactacatt cagtgcgccc gccggggcgc ccggaggccg aggaagagac gaaggggaga 360
 gagagtgaca tggctgcgcg cattccgatg cgtgggcatg ttttttgatt cgacacacct 420
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<210> 1592
 <211> 435
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-E8
 <400> 1592

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 aatctgctag ttgatgttca ggggtgtagc aaattggctg actttggaat ggcaaagcat 180
 ttaagtactg cagcccctaa tctttcactg aagggaacgc catactggat ggccccagag 240
 atggttcaag ctacactaat gaaagatgta ggctatgac tcgctgttga catatggagt 300
 cttggctgca ccatcataga gatgttcgat ggaaagcctc cttggagtga tcttgaaggg 360
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 gaaggcaaag aattt 435

<210> 1593
 <211> 450
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-D8
 <400> 1593

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 ccggcggcgg ggggtgggcgc gggcgcggat gggcggttac agcgaggcgt ccacctcggg 180
 tctgccgcgc cgcgcgcgc cgcgcagga ggcggcgag tcgtcgtccg ggggcaggag 240
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 gccgccgatg cccggctcgc ccagcttcag gtactactgc cagaagaaga cggcgccgt 360
 cgacaggatc gtggccgacg ccgacgcgc cgacgccgat gactccgtca gggtcagagc 420
 gacggcgct cagctgagca acaggtgcga 450

<210> 1594
 <211> 444
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-C2
 <400> 1594

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 tgggcgcctc cggcaatggc aagacagaca gcacgaaggc tgtgcaggag gcatgggcat 180
 cggcgtgcgc cggcactggg aagcagacaa tctcataacc caagggtgac ttccttgctg 240
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 tgctggcgac cacggaccta agccagtaca aggaccatgg taattggatc gagattctac 360
 gcgtggataa cctggtcac accggcaagg gaaaccttga cgggcaaggc ccagccgtgt 420
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<210> 1595
 <211> 421
 <212> DNA
 <213> Zea mays
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 <223> Clone ID: LIB148-011-Q1-E1-C4
 <400> 1595

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ccacgtcaac cacggcaagt ttaaggcgga gccgtggacg gacgggcacg cgacgtacta 180
 cggcggggcgc gacgggttaa ctgacaccac ggacggccgc gcgtgcggct acaaaggcga 240
 gctggggaaa gactacggca ccctgacggc ggccgtgggc ccgtcgctgt acaccaacgg 300
 caccgggtgc ggcgctgct aagagctcaa gggccccaag ggcaccgtgg tggtagcggc 360
 caccaacgag gccccgccgc cggtagagccg gcagaagggg caacacttcc acctcaccat 420
 a 421

<210> 1596
 <211> 418
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-C5
 <400> 1596

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 ctgcaactgcc atccctagcg taacactaag cctagaggag aaagaaaata tcaatgggga 180
 tgttcccacg atcacctcgg ccgcaagcaa cgatgaggat gcgttggtca gtgtcggaga 240
 atccaccaag gacgatggcc atcgcttgac gatggaatgc accactcccg tctcctccag 300
 tagcccttcc actcgcaaga agcgcggggc gttcagcctc ttcaggggca tgttcctgtc 360
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<210> 1597
 <211> 430
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-C7
 <400> 1597

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 tgcggctgca gcggcaggcg tgctgcgagc cgtcgggtggc gccgtcgcgg gcggtgttcg 180
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ccggcggtgcc ggtgttcgtc atgatgccgc tggacaccgt caaggagtgc ggcaccgcgc 300
 tgcaccgcgc caaggcgggtg caggccagcc tctccgcgct caagagcgcg ggcgtcgagg 360
 gcgtcatggt ggacgtgtgg tggggcatcg ccgagcgcg cggcccgggc cgttacaact 420
 tcgcgggcta 430

<210> 1598
 <211> 133
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-D6
 <400> 1598

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 tcacaatatc aacatcatta ctgtctttac tatcttcacg gcttacgggg ttggtcatct 120
 attctctcag tcg 133

<210> 1599
 <211> 415
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-011-Q1-E1-A6
 <400> 1599

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 gtgcactacc ccgctgcgga tcagcgtctg cagacgttcc aaatttttca ccctgggtatt 180
 tcccccaac attgccacca tctccgaagt ggagatcaag gagcacgggtg gcgatgactt 240
 ctcttttgag ctcaaggagg gcccggccgg cacctggacg cttgacacaa atgccccact 300
 caagtacccc ctctgcatcc gctttgccat caagtctggc ggctaccgca tcgccgatga 360
 tgtcatccct gaaaatttta tagccgacac cacctacaag aacaacctca gcac 415

<210> 1600
 <211> 420
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A7

<400> 1600

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acccaaacaa caggatcacg atcgagaagc tggctgagca cccttggttc aagaaggggt 180
acaggccggc cgtcatgctg gcacagccgc acggctccag cagcctcaag gatgtccagg 240
tcgccttcag caacgccgac cacaaggaca gcagcagcaa ggtggaacag ccggcggaca 300
gtccttgaa gccggcgagc ctgaacgcgt tcgacatcat ctccactcc agagggttcg 360
acctgtcaag cctgttcgag gtggaccaag agcagaaggc cagcaactcg cggttcatga 420

<210> 1601

<211> 187

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A9

<400> 1601

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cggggtcctc gtcgtcggcg cggtcattgt gcgggatgta ggcgagacct ttcatgactc 120
gtgtatcaag acccagttcc ccactatctg cgtccacagc ctgcgccgta atctgtacag 180
ccacaat 187

<210> 1602

<211> 287

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B1

<400> 1602

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ccctgaccgt gcgtgcaacc ttgcaaagca ggcctttgat gaggcaatct ccgaactaga 180
cagcctggga gaggagtcct acaaggacag cactctgatc atgcagctcc tgcgtgacaa 240

cttgacccta tggacttccg acaccaacga ggacgccgga gatgaga

287

<210> 1603

<211> 190

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B3

<400> 1603

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gtcgtcgaaa cttgtaatca cacgttaagc cccttggatg caatggtatt gctcgtgca 180
gcacccatca 190

<210> 1604

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-B5

<400> 1604

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cggcgccggc cgcccggaac gcgcccggcg gggcggttcag caactgggtg gcgatgaacc 180
agcagagcta cgcgctgtac gcgcagaagt ccgtcgggga cgggggcaag gagcccctgg 240
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agggcgacta caccaacatc accgcggcgc tggaggatat cccggtgagc aacaccaagc 360
gcgtgatcct ggatctcaag cccggcgctc agttccgcga gaagctgttc ctgaacatca 420
gca 423

<210> 1605

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-B7

<400> 1605

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caacattttg ttcactagtg tggtagcttt gttgattgga gtgcgcaatg ggaggctgtg 120
cgggaaaggt acgtcgtgat gacgaagaaa agcttgattt taaagggtga aatgttcata 180
ttataacaag caatgagggc tgggaccaga agattgcaga agcaaacaga gatgggaaaa 240
ctgttggttc aaatttcagc gcttcctggg gtgggccatg cctgtgcatt gctcctgtct 300
atgctgaaat gtcaaagact tatcctcaac tcatgttctt gacaatagac gttgatgacc 360
tgatggactt cagctcttca tgggacatcc gtgcaacccc gacattcttc ttcctcaag 419

<210> 1606

<211> 441

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-C1

<400> 1606

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ctggcggtag cccaaagaaa ggtgaggtca aacctgctgt cgacccagtt caaactccag 180
ccacaagtgc agattcacca aaatccgagc ctagtgtccc accactttct gagaccgaag 240
aagtagacaa catggcaatc gatgaggtca gtggtgatgc tgcaganggc gcggaagagc 300
ttgaccctgc gctcgaggag acgccgatgg aggagacgat tctgtgtgac gcgcgcaagc 360
taaggaagcg caacgccacc gaggattctg ctgggaatta gctgcatgcc gttgttttcc 420
ctgcacattg tattgatctt t 441

<210> 1607

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A5

<400> 1607

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gaggaggaga ggaaagagac gaagggcgcg ccgggaagga ggaccaggag ggggaggcac 120
acaacgcttc ctcttgacg cgaggagtct caagcctcct ccttggcctt ggctccaatt 180
cggggtgcca taacacgacc tctgcccggc gccggccacc ggcacccatg tcgcccttct 240
acctcgctcg cggtgcttcc aagctagtga gaaggattac ctcgagaca tcagtcgagc 300
tcaagattct ctctgaaaaa tggcggcttc tcctcgctgg cgtcattttt cagtacattc 360
atggtttggc cgctcatggg gttcattatt tgcaccggcc ggggcccaac ctt 413

<210> 1608
<211> 71
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H1

<400> 1608

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ccccggcaaa a 71

<210> 1609
<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-H12

<400> 1609

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agaagagccc gtcccacgag gttctgccgg acgtggctga cgaggagcaa ccgccggtac 180
cagcgccacc gcaagatgag aaagaagagg acaactaaga tcggagcgac caacaaccac 240
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gacgcttctt tattccctcc tccctttttt ttctctttaa tctctctgtg agaccggttt 360
atcatcacgc tgcaatcaag tgtgccagat gccttcgtta cgtctgaggg tcacgacaat 420
ggaaaatctg acatggacct gtc 443

<210> 1610
 <211> 263
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-H2

 <400> 1610

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 tcttatccgt cctcttctgt gccgcggctg gcaccgccgt cgacaacgac ctccccgact 180
 acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc cgggttcgtg aacaatgtca 240
 ccgagttcat cgcgggcccc aag 263

<210> 1611
 <211> 291
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-H4

 <400> 1611

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 acccgtgcc a gcagcagtag cagcagccgg cgtgtgacgc tgggtactgct cgggtctccgc 120
 ctgctgcttc tgggttggtgt tgcgcaggcg gtagtggagt tgggtgcctgc tgatgataat 180
 atcgccgccg ccgtgctggt cacggcggtg aacaatggcg agccgcctca gcattgcgcg 240
 accccggtga ccgtgcagga ggcttgccgc ggcgcgtccg aaacgcaccc c 291

<210> 1612
 <211> 189
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-H8

 <400> 1612

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aagctcatct tgtatgttgg tcaactgctt gcaccactta gtcgtggact ttaaatacga 180
attcggttc 189

<210> 1613
<211> 349
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A11

<400> 1613

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actcagccgc cgcaaccgcc acatcagcca tgggcgcctg cgcaaccaag cccaagacgc 120
ttgaggggca ggccccagct gagggccgcg tctccacacc caaggttgcg cccgaggcca 180
ctccaatctc cgttgaggtt gcggtgatg aacaggtagc tgagaagggtg gtggtggagg 240
agccggctgc ggcggccgac gttgagcatc agaaggctaa tgaggtgctc gctccagagg 300
cggccgtcgc cgagcccgac catcaagagg aggaagccgt ggagaagac 349

<210> 1614
<211> 190
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A2

<400> 1614

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cctttcttcc tagtgtccag ggttcttcgc gtcgcctcc tctgatcgtc gtctcttttc 180
acgtctccat 190

<210> 1615
<211> 338
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A3

<400> 1615

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cagaacctag ctagctaggc gtagaacgaa tgacgaggca gggcggcagc aggtcgacga 120
cgacgctggt cgccgccgtg gccgtagtctc tggccgtggc ggcggcgtcg tccctggccg 180
gcgtggcgtc cgccggagaag gcggggcgggt tcgtggtgac ggggcgcgtg tactgcgacc 240
cctgccgcgc cgggttcgag acgaacgtgt ccaggagcgt ggccggcgcg acggtggaag 300
tggtgtgccg gcacttccgc gcgtccaagg agacgctc 338

<210> 1616

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-G9

<400> 1616

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cctggcatgg tgggtcaatct ggacgatctt cctttgactg cagctgagaa gaagctaattg 120
catgcgtata acgagaagcc tgtcctttct ataccacagc atgagtttta cctgggtgat 180
aactacttcg agatcgacat tgacatgcac agatttagct acatctcaag gaaagggtttt 240
gcaacatttt tggacaggct aaaagcatgt gttctagatg ttgggctaac tattcatgga 300
aataaagctg aagaactgcc ggaacaaatc ttatgctgtg ttaagttgaa tgggatagat 360
tacaccaaat accagcctct tttgactcaa gctgcctg 398

<210> 1617

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-A4

<400> 1617

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aatctaggcg ggtcttctctg gggctcgatc tgggtctcat ggttggctaa tttctcaccg 180
gagcatttgg gggacgggcc gtgcgcctcc aatttctcgc cgtcgacgtg ttctccgcgc 240

cgggactaca gcgtgccatg ggcgggactc ctgggagctt aatccgcgcg cgaggtcacg 300
 agtcacctga agatcatcct ggtacctgga atctcaagtc ccagggtcaag agcagggtacc 360
 acaggatgag gcgcgtggag gatgctgtga tgagttcgtg agtgggtctag gtcgtcgtct 420
 cccagtcaac tt 432

<210> 1618
 <211> 419
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-010-Q1-E1-F11
 <400> 1618

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 ggcgccgagc gtgatctccg tccgtgccgc catggcctcg caccggggcgc tgctgcagca 180
 gctcctcgcc gccgcgctcg tcgctgcgct ggcctcagtc gcatccgcgc acgacgccat 240
 cgccatgcc accagcctgg ctctcgtgga gcatagcccg cggggggtcct acgtctgcga 300
 caagccgggc tctgaatata aggcgcgtcg cgacgaagag gaccccgccc ctgtctgagc 360
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<210> 1619
 <211> 341
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-010-Q1-E1-F3
 <400> 1619

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 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120
 tgtttttttt tttttttttt tttttttttt tttttttttt ttttaaccccc aaaaaaaagc 180
 aattaagcca caaaaataaa tgggaaacaa aaaaccata tataaaacac atgaaaaaaa 240
 tgatggaaac cgtttttcaa acccccacaa aatttgagtt taaaatccaa aaccgtgatt 300
 caaaaaaaag ggccataaaa aaccggttca caatgaagga a 341

<210> 1620
 <211> 201
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-F6

 <400> 1620

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 gctgccgtcg cggtcctggc cgcgcgcccg gcgtctgcag gcgggggagc cgcggcggtg 120
 gcggagatct gcatgaagac tccgtcccc cacctgtgaa ccaggaccga ggggaagcat 180
 gccaacaggt acaaggtggt g 201

<210> 1621
 <211> 379
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-G12

 <400> 1621

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 ccaaataagg tcccgcctt ttccgacatt cacagggggg acaggaaatc agcggccatg 120
 gcctcgattc cggcgacgac ctteggcgtc atcttatccg tctcttctg tgccgcggct 180
 ggcaccgccc tcgacagcga cctccccgac tacgtcatct atcgccgcgt ctattgcgac 240
 acctgccgcy ccgggttcgt gaccagtgtc accgagtaca tcgcggggcg taaagtgcg 300
 ctggagtgcg ggcacttctg caccggcaat ctcgagcgct ccaacgacgg ggtgaccgac 360
 gggatcggca cgtacacga 379

<210> 1622
 <211> 200
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-G6

 <400> 1622

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ctgtcttcat cgtaaggatg tagcagtgcc tccacagctt cggccacaac atcgatgcgc 120
 agcagcacac gaaaggctat gtacagcacg agacgggcta ggagcagctc atgatggacc 180
 attgggacca catggagggc 200

<210> 1623
 <211> 423
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-010-Q1-E1-D9
 <400> 1623

cgggccgatg cgagcctcca gccggtctcg cgtccgcca cgcgtccgcg cgagcagcca 60
 acgatccctc gatggggcgc atgggtcgtt cgtctccct cgtcgtggcg ccgcctctcc 120
 tcgtctctgt cctcgtctca gccgctgcca gtgcgcggac cgtgggggac accgtgcagg 180
 acgcgtgcag caatcaccca gttccccaag atgtgcgtgg acagcctcgc cgccaagccg 240
 gagaggcaca cggcgacgcc gcgcacgctg gcggcgctgt tcgtggcgat cccggccgag 300
 aagggatgcg ggatggggat cttcgtgcac cggcacgtgc agcgacaggg aggacagga 360
 catagtcagg tgccacgaca gcggcgcttg acacgtggag gaggccgtcg gccaggtgag 420
 cgg 423

<210> 1624
 <211> 373
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-010-Q1-E1-E2
 <400> 1624

gcttcggtag ggcaaaatac tttctttgac gttttaaaat atgttgctgc ccattcccct 60
 tctcggaat caaggctgca ccctcatcag gaaccacagc agcagcaacc acatgtgcat 120
 gtggagctgc atcagcaacc acaagtgcag gtggagctgc agcagccgca accacatcaa 180
 caagcatcac ctgttatgcg cagaggagca tctattgctg ctcggcaagc agaaatggca 240
 cagcaatctc tggagactat acccgttcca tcttcacca agatcaagcg tcaaacaatca 300
 gggagacctg gttcgggtggc atccacaaag cctgcagcag ctgcatccac accaaaacct 360

ggcggtagcc caa

373

<210> 1625

<211> 251

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-E6

<400> 1625

aaacaagcag cacctgttat ggcagagga gcatctattg ctgctcggca agcagcaatg 60
gcacagcaat ctctggagac tatacccggtt ccatcttcac ccaagattaa gcgtcaaaca 120
tcagggagac ctgggtcggg ggcattccaca aagcctgcag cagctgcatt cacacaaaaa 180
cctggcggta ccccaaagaa aggtgaggtc aaacctgctg tcgaccaggt tcaaactcaa 240
gccacaagtg c 251

<210> 1626

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-B2

<400> 1626

tgcgtgcgtt cgtccatcca cagacaggcg tccgggcaca atgtctttca ccggaacgca 60
ggacaattgc agggcgtgag acaagaccgt ccacttcatt gacctcttca cggctgacag 120
tgccatctac cacaagacat gttcatgtg cagccactgc acatgggtcc tcgcgatgtg 180
cagctactcc tccatggagc cgtgtgcctg tactgcatga gccacatcga gcagctcttc 240
aaggagatcg ggagcttctc acatgaactt cagccacgt ggcacgtcat cagacaatgg 300
tgaactgaca agggcgtcaa gcaagctgtc gtctgcattt tctggtagcc aggataagtg 360
cgcagcatgc cagaaaacag tgtacccgc 389

<210> 1627

<211> 267

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-B4

<400> 1627

ccacacgtcg gccacgcgt ccgattaggt ccaaaatgac ccttgccacc accattagca 60
gcagccgggg tgtgacgctg gtactgctcg gtctccgcct gcggcttctg gttggtgttg 120
cgcaggcggt attggagttg gtgcctgctg atgatattat cgccgccga gctgctggaa 180
cggcggtgga cgatggcgag ccgcctcagc agtgcgcgac cccggtgaac gttgaggatg 240
cgtgccgcgg cgcgttcgag acgcacg 267

<210> 1628

<211> 72

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-B5

<400> 1628

acacgcctct gcactgattc gtaatacaag atcgctctgtg aatgtgagaa ccatgtggtc 60
gtccactccg gc 72

<210> 1629

<211> 181

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-C4

<400> 1629

aaaaatctgc cttcttcgga attgccctga accagatggg attggcatgc gttcaaagat 60
attcgataaa tgaagcagca gaactgtttg aggaagctag aacagttctg gaacaagaat 120
acgggcctta tcatccagat actttaggag tgtacagtaa tcttgctgga acttatgatg 180
c 181

<210> 1630

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H5

<400> 1630

gtcagaggggc cgcgtcacga cgtcaaagtt cgaggccgcc tgcggcgggc cegtgcgcga 60
 tggctcttgc agctgcagct tctccaacg caaatatcat ggagcatcat ccatagcacc 120
 atctccttgg ccgtgacgcc cgtgatcgtc ctgatctgtg ccgtgtcttc ccgaccgcag 180
 acacctcggc gccgtacatg acatgcctgc cgggcttgca gaactattcg tcaacgttgc 240
 ggggctgccc tgagcacaca agagctctct ctccgacggt aacgcactcg attatgtcac 300
 gcagccggag caggcagctg ggacatgcac gtctcctgca ggagccgcat ttctgcctgg 360
 cccgccgtat caccacactt gacctccgcc 390

<210> 1631
 <211> 295
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H7

<400> 1631

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 caacatcagg gagcacagat cctgtatcga cgtggccggc gtcaccgtgg cggctctgcgc 120
 cgctgttttc tgetgcatcg tctgcgtcac ggcggacgtc tccgtgctct ccacgtgtgc 180
 acgcgcacgc tgcgatgtgc tgcaaggccg cccgcttgcg cacagtccac aggcaactctg 240
 cctcggtcgg tcacgggagg gggatatagt aactcgteta ggaccacaca ggcgt 295

<210> 1632
 <211> 332
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H8

<400> 1632

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 ctctcggcgc ggcgcgcggg gcaccggccg ccggcgggcg gcgccctgaa cccggacttc 120
 aatacccagt cgtgcccgcg cgcggagcgg atcattgcgg aggtgatgca gacgaagcag 180
 atggcgaacc cgacgacggc cgcgggcctg ctccgcgtct tcttcacga ctgcttcgtc 240
 agcgggtgcg acgcgtcggg gctgatcgcg tccaccagt tccagaagtc ggagcacgac 300

gcggagatca accactccct ccccggggac gc 332

<210> 1633
<211> 182
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A2

<400> 1633

taacctcgtc gcctcctcca ttgaccatca attaacccctc ccgatcgcc atatctatca 60
tgtgcagtc tgggtgtctg tgcacgatg cctactacgc ttgacgggat atcaccaact 120
gacgtacca tctccacacg taacgttga cctaacacca tctagtatcc acattgaggt 180
tg 182

<210> 1634
<211> 138
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A4

<400> 1634

agggcacgca aggtcacgac gatgcccgtt ttcacccggg ataccgcata ggctgtcgcc 60
catgggcacc atagccagga cctcggctca caaaaaggtc ctccgattct caaaggccgt 120
tttgcctggc atcacgta 138

<210> 1635
<211> 63
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-010-Q1-E1-A7

<400> 1635

ccctcaagta ccccatcgag cacgggatcc tcagcaactg ggacgacatg gagaagatct 60
ggc 63

<210> 1636
<211> 441

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-010-Q1-E1-A9

 <400> 1636

 gggccgaccc aagcgtccac gccaacgccg atcgccacgc cggaaacata ctcgtcgcga 60
 agcacgacgg cggcggaggc ggaggcatgt cgctggttcc catcgaccat ggatactgtc 120
 tgccggagag ctctgaggac tgcactttcg agtggctcta ctggcctcag tgccgggagc 180
 ccttcagcga cgagacggtg gagtacgtgc ggtccctgga cgcggaggag gacgtgacta 240
 tgctgaggct ccacgggtgg gaggtgtcgc gcgagtgcgc gcgcacgctg cgcgtcgcca 300
 ccatgtgtct gaagaagggg gtggagaggg gcctcaccgc cttccacatc gggagcatca 360
 tgtgcagaga gacctgacc aaggagtccg ccatcgaaga gatcgtcctgt gaggcggcgg 420
 aacggggagg aggatgag a 441

<210> 1637
 <211> 417
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-009-Q1-E1-G10

 <400> 1637

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 gatcagctcc accaaccaag atgaacttgg agcgttatgc caacagatgc actagaagac 120
 gttgtgtctc acgatgacga cactgcctgg ggtgactacg ccagagcaac tcttagatgc 180
 atccctgcgg attacagcgg tgaaggcagc gatggcggag atgaagctag acaatgcaat 240
 aaaatcaggc agtgtcagg gtaaccgat gatgtcgtcg ctaaagacat gcaaggagag 300
 ctacgcgtcg ctggtagact ccatcaatac cacgcggaac acgctcaaaa ggcgcggcag 360
 caatgcagac ctcatgtcgg agctatccgc ggcggacacc ttgccaccg actgcgg 417

<210> 1638
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-G11

<400> 1638

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gctggagccg agccggggcg ggggccgcga cggcagcctg gtggactggg cgcgggcccat 120
ccttatccgg cccaaaaagt tggagcggat cctggaccgg cggatgggcg aggtctgctc 180
ggagatgggc ctgcagcgcg tggccgcct cgcgtacgac tgccctcagcc agaaccctcaa 240
ggtcggggcc tccatggcca gggtcgtcac cacgctcgag gcagtcctcg ccgccggtgc 300
cggtgccgcc gacgccccgc cgcggtgaga ccggaggttg atgtangtag tanggtcggc 360
atacggatta attaggtgcg tacgggtata tgcttgggcg gaggaggcat gtttaatt 418

<210> 1639

<211> 403

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-G12

<400> 1639

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acaaagatga agaaggggat cctgaagccg ttccgctata tctcaaccat catggatggg 120
aaggaggctg aaatgcaaat tgggttcccg acggatgtaa aacacgtggc acatattggg 180
tgggatgggc ctgggtccac gaacaacaac aacaataaca acagcaacaa caatagtggc 240
ggagcaccta gctggatgaa ggattaccac tcggcaccgc ttgactcgtc ctcttttagg 300
agtgagagtg ggggcacggc tgctgcaaat cnctgngett ctcaagagat agtcatggat 360
ggagcaagcg tcggagaaac ctcttcaag gacacgaaaa gcg 403

<210> 1640

<211> 98

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-G4

<400> 1640

gacccaaacg tccagccttg gtctcgtgcc cgaaggacgc ctgccttcgg ttcctcactg 60

gcatggatga attagtcgtt tcggcgacga tcaactgcc

98

<210> 1641

<211> 144

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-G6

<400> 1641

cagccagcag gcagcttget cgccgcgccc gtccttcttc ctgcctccg ttccgttccg 60

ttccgtcacg cccaccgcg cgcgcgcatt caggaggggc aatgcagcag atgcctgcg 120

ccgtccacga caccgcctca gcgg 144

<210> 1642

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-G8

<400> 1642

cacccctccc ctgcgtcacc ccaccatata cggccagccc aacgaaaatg tcgcgcgcca 60

cagctgcggt cctctttctac atcctcgccg tcgctgccct cagcgcggcc gaggcaccgg 120

cagagtcacc gaaggcaggc agtcctgcca aggcaccggc cgagtcaccg aaggcaggca 180

gtcctgcagc tcttgccaag gcacccgagt ctgctgccac gagaactgcc cccgctaagg 240

cacctcaagc cgctccacc cccgcgcgtg ccgctgcccc atcgtcgtcg tcgtctaaga 300

agtctggtcc agctgcgcg cgcaccaccg ccgcctctac accgtcttct tccacggacg 360

aagagtttga gccttcgccc tcggcatcca acgccgaggt ggcgtcncct gccgctgatg 420

ggcctgctg 429

<210> 1643

<211> 337

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H10

<400> 1643

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ctcccccgac cgccgttcat gctcctgtct ggctggctcg ctggccgcct caacgggaac 120

gctgccgtag aatgacgact ggggctggtg ttgttgttac agtatggtcc ttttttcttt 180

cttctttccc ctttcatcca ttaagctctg tgatgtagcc gcccgtagtg ttgattcatg 240

aaatcatgcg agagattttt tcctggaagt aattgctgct ctgttacact gtcgaaccta 300

tttggaccaa agttgtacac cgcagtatga tgttacc 337

<210> 1644

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H11

<400> 1644

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caagcaatct aggctcagca tgattcacaa cgcaatgcag gagacgcccc ccatcagcat 120

cgacggccac gacatcatac tcctggacct ggagggctca tataacctgc acgacgtgta 180

ctactcgctg aacgtgcacg tctgccactg catcgccctc ctgtactacg acgactaccc 240

gcccggttac tacaacatgg tgtccaccac cctgttcacg gacaacgcca agtccgcctc 300

cgccgtcatc cgctactcca ggcgcagccg caccgcgccg gcgaccaaca tgaacaagcc 360

atcggacagg ctggccatcg ccatcaacca cacca 395

<210> 1645

<211> 234

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-H12

<400> 1645

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gcacaggcgc tgccgtcggt gttagagtca ccgcatgttt acattcgta tgacccttc 120

gttcagtacg cctctgtgcc atgcatgcac atagatcatg ctactgaag tctacagtt 180

tgccatatct cgttacgtac actacgcttc tttatcccct cctccctttt tttt 234

<210> 1646
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-F8

<400> 1646

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catggaatcc gccgatgcac cggaggcggc ggccgatgct cccgctccta gccccgactc 120
cgccatcatcc ccagactcgt catcggaggc gccctctagc agcagttcct ccgactagac 180
gcaaaaacct cttcattctc tggaataact aacagtatat acgttgcacc ctgatgatat 240
agaaacatgt acgtgcatca gtgtatggaa tgcgagtggc aaacacatgg aatgtgcttg 300
cctaattatt gtttatttct ttatttatta tatgtctctc tcgtttgttt tttatttttc 360
ttaatgcaag ttatataatt tgttataccc aata 394

<210> 1647
<211> 73
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-E5

<400> 1647

accttgtcac cacacgcagg taccaacaag gcgacgatca tggcgaggct gtccttggaa 60
cgggcggtgg ttc 73

<210> 1648
<211> 361
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-E8

<400> 1648

gccccggccc aacggcccc gaaccaattg gccgttcgga accggggcggg gccccccggc 60
gcaacagcag cccgagtacc cggaacaagc ggacctggaa gacgtgctgc ggacggtggg 120

aacgttccccg cccatcgtct tcgccggcga ggcgcgcacc ctcgaggagc gcctcgcgga 180
ggccgccgtc ggccggggcct tcctcctcca gggcggcgac tgcgccgaga gcttcaagga 240
gttcaacgcc aacaacatca gggacacctt ccgcgtcctc ctgcaaagtgt ccgttgtgtct 300
catgttcgga ggccagatgc ctgtcgtcaa ggtgggaaga atggcaagtc agtttgcgaa 360
g 361

<210> 1649
<211> 402
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-009-Q1-E1-F11
<400> 1649

cggacccttg ggcaacacac acatccgtga aagaaacaag cacatgaaaa caaatacatc 60
gctagctcgc caccaacaat ggccctcaagg tactctatcc tgcttgccac aacgacactg 120
gctatgttgt tcgcattcgg ttcgtgcacc accccactca ccttccaggt cggcaagggc 180
tccaagcctg gccacctggt tctcaccct aacattgcc aatctctga cgtggagatc 240
aaggagcatg gcggcgacga tttctccttt aactcaagg agggcccagc tggcacttgg 300
acgctcgaca ccaaggcccc gctcaagtac cccctctgca tccgctttgc taccaagtct 360
ggcggctacc gtatcgccga tgatgtcatc cccgccgatt tc 402

<210> 1650
<211> 239
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-009-Q1-E1-F12
<400> 1650

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caggggggag gggaaaacac gtgcattcac ccggcggcaa taatggcctc ggttcgggct 120
ccggcgacga cgaccgccgc cgtaatccta tgcttatgcg tcgtcctctc ctgtgccgcg 180
gctgacgacc ccaacctccc cgactacgtc atccagggcc gcgtgtactg cgacacctg 239

<210> 1651

<211> 254
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-009-Q1-E1-D2

 <400> 1651

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 aaactgcaag aggtcgagca caccctaac gccggccaac tgacgacctt caaacgcgcc 120
 aaccctacag acatgtgtag atgattgcga cgatcgtcac ctccactcta ccccatgtcc 180
 tcatttaggc tacagcagtg tcggccacca ctgacgacgc agccgacggc gatctaact 240
 cgtccgagtc atct 254

<210> 1652
 <211> 410
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-009-Q1-E1-E11

 <400> 1652

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 ctccacaatg ccgcgccatc tcgcgtgct cctgcccctg ctactgctgg cctcgccggc 120
 ggccacgcgc ctggcgtccg ccgcctgcgc gggcgagaag ttcccggcgg ggcgtgcgta 180
 cgcgtcgtgc gaggacctgc cgaagctggg cgcgtcgtc cactggacgt acgacgcgtc 240
 caagagctcc ctgtcggtgg cgttcgtggc ggcgcccgcg gcggcgggcg gatgggtggc 300
 gtggggcctg aacccgacgg gcgacggcat ggccggcgcg caggcgctgg tggcgctggc 360
 gggggccggg gccgcagcgc ccgcgtgcg gacctacaac attcacgggt 410

<210> 1653
 <211> 419
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-009-Q1-E1-B1

 <400> 1653

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cgaggaagaa gagatcaatg gcggtccgagc agggagtcgt gatcgcggtgc cacagcaagg 120
 ctgagttcga cgccacatg accaaggccc aggaagccgg caagctggtg gtcacgcact 180
 tcaactgccgc ctggtgcggt ccatgccgcg ccatcgcccc actgttcgtc gaacacgcca 240
 agaagtccac tcaggtcgtc ttcctgaagg tggacgtgga cgaagtgaag gaagtcaccg 300
 cggcctacga ggtcgaggcg atgccgacct tccacttcgt caagaacggc aagacggtcg 360
 cgaccatcgt gggtgccaag aaggaccagc tcttgcccct gatcgaaaag catgccgcg 419

<210> 1654
 <211> 404
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-B12

<400> 1654
 tactaatcaa attcttgttg ggatatattc ctccaattcc cctcctcctc ccaacaaggc 60
 aacaacaatc tgttcgggcc gccaaacaaa acccaaaaaa aaaaacacac tgaaccaat 120
 aatccgatcc cacagaaact tttctctcgg tccgttcgat cgatcgctgc cgtgtcgttt 180
 gccagacacc atcagcacc cccaaaccatgg cctgcaacct ggctcagtgc gccaccgccc 240
 ccgcgggcgac cgtcgcgccc cgcacccctc gccctgctgc gtccgcgtcc gtctccttct 300
 ccgcgaggaa gccggcgggc ggcagcctgc ggctgcagcg gcaggcgtgc tgcgagccgt 360
 cgggtggcgcc gtcggggcg gtgttcgcct gccggggcgc ggcg 404

<210> 1655
 <211> 409
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-B6

<400> 1655
 gcacgcctct acagtgcgt cgtgagcagt acaggggcat gatggacgcc gcgcgcgccg 60
 gcgaggccgg cagcggatgt ggcgtcgagg agtacctgag tcgcggcctc cgagcgttcc 120
 aggcggcgcg accggggcgc ggcaaggagc tggaggaggt cgaggacgcg ctgctcgcca 180
 tgcacatcaa ccgggagagg gcggacacct ccgccgacga tctcggcgac ctcgacctcg 240

ccatcgaagg cgagtatcgc gacttccccg gcgagcacgt cagatccct gccgggtact 300
 cacgcgtcgt ggaacacctc gtcgcggcgc ttccgccgga taccgttcgc ctccggccacc 360
 gcctccgccg cctcgactgg agcgagactc ccctgcgact tcacttoga 409

<210> 1656
 <211> 211
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-C10
 <400> 1656

gtgggacgta ttagagcagg tgctgataaa tcaccggcat cgagatcagt cagatggacg 60
 attaccttcg gctttacgtg catctgaact ctacttgat cgtgctccag catcaagcgc 120
 atctaggact ataccgtatg actacgtcgg ttggagtctc acatgggacc ttcactaggt 180
 tcgtcatcga ttcaggttct gacatgcata t 211

<210> 1657
 <211> 259
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-H4
 <400> 1657

actgcaaagg ggtcctctcc atgtgcaact actcctccat gacggtgtgc tgtactgcaa 60
 gaccacttc gagcagctct tcaanggaga cggggagctt ctccaaaaac tcacgccagg 120
 tggcaagtca tcagacaagg gtgaactgac atggggccca ggcaagctgt cgtctgcatt 180
 ttctggtacc caggataagt gcgcagcatg ccagaaaaca gtgtaccgcg tggagaagtt 240
 aactctggaa ggcgagtc 259

<210> 1658
 <211> 426
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-008-Q1-E1-H6
 <400> 1658

cgtacgagga cgccgcctcc gtgctcaccg tctccaagat ccactacgag aatatcaaga 60
 tggaggactc agccaacccc atcttcatcg acatgaagta ctgccccaac aagttgtgta 120
 ctgccaacgg cgctccaag gtcaccgtca aggatgtcac cttcaagaac atcacgggca 180
 cctcctccac cccggaggcc gttagcctgc tctgactgc caagggtcca tgcaccggcg 240
 tcaccatgga tgacgtcaac gtcgagtata gcggcaccaa caacaagacc atggctatat 300
 gcacgaacgc caagggcagc accaaggggt gcctcaagga gcttgcacgc ttctagacct 360
 tccgtcgact gacccatctc tctagttata attttctct cgctccttgca ttgccatta 420
 gatgct 426

<210> 1659
 <211> 161
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-H7

 <400> 1659

gcgtccaggt gtctttggag tctgcggagg tgctcactct gctggggata cataactaga 60
 ctatcaacca tgcagaatca cgtgatctga gctagcaggg cactggctct gctcgcgcga 120
 gtttgagtag cgctcgtggc acctgcagtg ccacctcaag t 161

<210> 1660
 <211> 432
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-H8

 <400> 1660

cggtccagc ggcagccagc aggggaggag gacacgaatc gtagtcgggc tcccgcccgc 60
 cccggcaatt gttgttgctg ctgcgcgcgc ggcngttctg gattggcggtc tgccccaccc 120
 acgaacaatc catggctcca tctccgcctc ggcgtgctgc gctcctcctc gccacgggtgc 180
 ttctgctggc ggcggccggg tccacccccg gcgccacggc tgctggcctc ttccaggtgc 240
 gccgaagtt caccgccggg gtgggagggg gtgctggcgc caacatcagc gcccttcgcg 300

cccacgatgg caccgcgtcac ggccgcctcc tcgcagccgc cgacctccct cttggcgggc 360
tcggcctccc cactgacact ggctcttatt acacggagat caagctcggg acgccacca 420
agcactacta cg 432

<210> 1661
<211> 363
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A11

<400> 1661

atccacccgg cttggtaacg ccacgcatga aaggtaaggg aaaccttgac cggcaagggc 60
cagctgtgtg gagcaagaac tcctgcacca aaaaatatga ctgcgagata tttctcaa 120
cgctgggtgat agacatcttg aacaaagggg aggtgtcctg ggtcatactg cgcaacacca 180
caatcttcca caagatcatg ttatagtga acgacgatat gatgatcgac gtgatcgtca 240
tgggcgcccc ggacaacccc aacaccgatg gcatccacat aggcgactca tcagggatga 300
ttatcatcaa caccatcatt ggtgtcgtcg acgactgcat catcatcagc gccgggagga 360
cca 363

<210> 1662
<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A12

<400> 1662

ggctccacgg gggtgacagt aagccgggac atggcgcgcg gtggcctcgc ccgcctgctc 60
gccaggetca tcatcttcc cctgctcgcc gccggacctt ccctcgccga gtcagaggcg 120
gaactcgctc ggggcgcgtc agaagcgtga cgggacgctc agcagcattt cctgccgcgc 180
ccgctcatca tcgagctccc gtcggcgcgg gccggggccg agctcgacgc ctaagccgac 240
ggcgacgccg tggtaacagt cgacgtacgc tgcgccagct ggcagctcgc g 291

<210> 1663
<211> 275
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A3

<400> 1663

ctgcctcgct ctccccctc ctatttaccg cccgcgtcga ccgccgccgc acgccttccc 60

acccccgcgc ctgcctctgc ctgcctgctc cccgacgccg gggggcccca caacgatccg 120

gccccggccc cgcgcgggtca cagcaagccg ggacatggcg cgcggctgta tcgcccgcct 180

actcgccacg ctctctctct tctctctgct cgccacgccc ctgcagacg gcgcttcgga 240

tgcagaggct gccggcctcg cgcattggcg gtccg 275

<210> 1664

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A6

<400> 1664

gcgtccagag tgactagcat ccatggatgt gacgacctct cctcctcgct gtctctctgt 60

atctgcacct gcaagcatgg caattacttc tgacaagatc tgcgccatgg cggcaaccac 120

cacggggatg cagatgatgc aggcggcggc cttgctcctg tgccctggctc tgttggcagc 180

atctacgcgg gtgcgcgtgg gcaactgccg cgaccactgc atggctgcat gcaacggctg 240

gaccatcgtc tgccagctct cctgtaccag cgcattgctac ggagaactcg ggatcagatg 300

cttacgtacg tcggctgtat tagctatagc ataatgcgcc tgcattcagca ccacatgcaa 360

tacactagcg aagcgccg 378

<210> 1665

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G12

<400> 1665

tcgcggggccg atacaagcct ctaaaggac tcgtgatagc gacgaagcgg tccatggaga 60

agctcggcct cggcgtcgtg gaggactggc gccctggctc catcgacgcc aaggaccagg 120

aggtcgccgg gtacgtgata gactacaagg gcgtggtgtt cgcgacgggtg cgcgggtccg 180
ggcacatggt accgatcgac cagccggggcc gcggcttcgc tctcttctcg tccttcatca 240
aggggcagcc gctccccaag gccgcgccga tggtcgacgg atgaagagcc acggtcggtg 300
ggattccgga gtttcacccct tgtctcgtca agtcaccatg catattgtct ccatttccac 360
gttaactacc agaccgtgta catactgact aaacgctcga tctgtgacct caactgttgt 420
atgaatgttt cgctgcagt 439

<210> 1666
<211> 291
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-G3

<400> 1666
ctacgcggag ctcatggaga tggcgcgcaa agccgggctc aagggtccagg ccgtcatgtc 60
cttccaccag tgcggcggca acgtcggcga ctccgtcagc atcncgctgc cgcgggtgggc 120
cgcggaggag atggagaggg accaggacct ctgctacacc gaccagtggg gccgccgcaa 180
ctacgagtac gtctcgtctg gctgcgacgc catgncgtc ctcaaggac gcacgcccgct 240
cgagtgttac accgacttca tgcgcgcgtt ccgcgaacac ttcgcccact a 291

<210> 1667
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G8

<400> 1667
acgcgtccag ctggttcgtg gatggctgcg ccacgacctc tcctgctgtc gctgctggtc 60
gccgtgctag cggtagccgc cgatgtcgcc aacgccggcc acgccaagcc cctgacgcct 120
ggcgggcgtg tggtagacga caaccacggc aagttcacgg ccggggccgtg gaaacccgcc 180
cacgcgacct tctacggcgg gcgggacggg tccggcacca cggcggggcg gtgcggttac 240
aaggacacgc gcacgcaggg gtacggcgtg cagacgggtg ccgtgagcac ggtgctgttc 300
ggtgacggca cggcctgcgg cgggtgctac gaggtgcggt gcgtggacag ccctagcggg 360

tgcaagcccg acgcggcggc actggtggtg acggtgaccg acctgtgccc gcccaaggac 420
cagtggtgca agcca 435

<210> 1668
<211> 343
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-H1

<400> 1668

aatcatctca tggtgaagg agcttgggca aaaaacgccg tacaaatgga gggagctctt 60
cgcggtgaaa aaagagaaac agcacgaaat tgaggataag atgcttgaca aattcacaaa 120
taagtttcaa gcatagagag ctgaaaaacc actgcaagca aatcaaacta tgtacaaagg 180
tgctccaag cagcaaaagg agtttctttg gaggaaagtg gacctagcac tgtatccagt 240
tccaactaca agagcactat actgaagaat gctacgatac atgttaacaa tcaatcaaca 300
ttgcagtctg ctatgcaaaa gaatactttt gcgacgtcat etc 343

<210> 1669
<211> 416
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-H10

<400> 1669

caactacacc agggccgacg acgggcagat gtacttcggc gctcccggag cccctgcgt 60
ggccaagctc gtcaaggctc tcgcagcgcg gccgtactct gtgtccatca tggagatcag 120
cgagcccatt ttgccggccg cgttgccctc ccccgctcgcg gcgcccggcc gccgcggcaa 180
gggtggtaag cgcaagatca agccatcagc ggcaacccat gaggattcca acatgatccc 240
gcgcaagccc gtcgaagcag tgggtggtggg taagggtgtaag gtggccaagg ataccgtgtc 300
cgagtcacct gtcceaagcc ccgccccgt ctcgccccct tagttgcgtg ttgggcgcgcg 360
ctgcncgccc gccccggcc accatgcgtc gtgtctgcgc gcgcacgcac gcattg 416

<210> 1670

<211> 403
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-H12

 <400> 1670

 ccccggtg cccgcgcgtc gtactcctct cgtcactcct ctgcgccgga gcgctcggtt 60
 tcttgcccggt ccccatgcc gccgcggtgg cgcgcgcta cgtcgccgctc tccgcgcgcca 120
 gcttcgtgcc gtcctcaacg tgcagctccc ccgaccgagt tccgccgcag cggcggaacg 180
 gcacgtccgc cgtgctgcgg ctgacgcaca ggcacgggcc gtgcgcccc tgcggggcgt 240
 cctcgctagc ggccccgtca gtcgctgaca ctctgcgcgc ggaccagcgc cgggcggagt 300
 acatactgag gaggggtgctg gggcgcgcg ctcagctgtg ggactccaag ggcggcgga 360
 cggtgccggc gagctggggg tacgacatcg gcacgtcaa cta 403

<210> 1671
 <211> 201
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-E3

 <400> 1671

 catccgtggt tgagccatac aacagtgtcc tgtccacca ctctctcctc gagcacactg 60
 atgttgctgt cctgctcgac aatgaggcca tctatgacat ctgcgcgcgc tcccttgaca 120
 ttgagcggcc aacctacacc aacctcaaca ggcttgctc ccacgtcatc tcatccctga 180
 cggcttcact gaagttctat g 201

<210> 1672
 <211> 380
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-D10

 <400> 1672

 gaccaagcg tccacagaga ctccatggac gatcaggaga acgagcacga caagcatgct 60
 gatgctggga ctgacgtcga cgaagaagag gatgacgaag atggccacaa gcgtgtcgtc 120

gttcttggac tccacgtccg cctcaaggaa cagctcaagc ttgacaagga tgatgagagc 180
ctgatgaggt ggaaggagca gctcctcggg caactcgaca ccgagcagct cggagagact 240
gcggcgccgg atgtgaaggt gctcaacctg accatcctgt caccggggcg gccagatcta 300
gtgccatcga tcccgttcga ggtctacgac aatggctatg cgtttacgct caatgatggc 360
agcctctata gcttccgttt 380

<210> 1673
<211> 279
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D3

<400> 1673

aactcatcgc ctctccatt tgacaacaat ttaacctccc cgagcgccac atctattagg 60
tgcagccatg ggtgcctgtg caacgaatcc taagacgctt gatgggaaag cccacactga 120
ggccaccatc tccacacca aagttgcacc tgagaccact accatccaca ttgacgttgc 180
ggcaaaacat gcagtaattg agaacgtgga tgacgacaac gatgaggcac caacagtggc 240
tgcgaaacaa gagccagcag ccaccattga acctcaacc 279

<210> 1674
<211> 330
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D4

<400> 1674

gatgggattc ctcgccaata acatcatggt cgtgggcgcc gtccttgccg cgcttgctgt 60
ccgcgggtca tgcgggcccc ccaaagtgca gcccgggatc agcatcacca ccaactacaa 120
cggcaagtgg ctcaccgcca gcgccacatg gtactgtcaa cccaactgtg catgcgctcc 180
tgacaactgc tgtgcgtgcg ggatcaacaa cgtgaatctg ccagcctaca ccatgatcat 240
cgcatgcggc aacttcccca tcttcaatga cggcaatggc tgtggctcat gctacgaagt 300
gagatgcaag gaaaaacctg actgctcggg 330

<210> 1675

<211> 75
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-E1

 <400> 1675

 ttgcctctcg ctggcgctgt gtaactcgct gccttctgcg gcttctcttg cgccaggatg 60

 ccttggtccc gttgc 75

<210> 1676
 <211> 397
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-E2

 <400> 1676

 cgtacattca cccggcgcca ataatggcct cggttccggc tccggcgacg acgaccgccg 60

 ccgtcatcct atgcctatgc gtcgtcctct cctgtgccgc ggctgacgac ccgaacctcc 120

 ccgactacgt cctccaaggc cgcgtgtact gcgacacctg ccgcgccggg ttcgtgacca 180

 acgtcaccca atacatcgcg ggcgcccaagg tgaggctgga gttgcagcac ttcgggcacg 240

 gcaagctcga gcgcgccatc gacgggtgtca ccgacgcgac tgggcactac acgatggagc 300

 tcaatgacag ccactacgat gacatctgcc aggtggtgct gggtggccac ccgcgcaagg 360

 actgcgacga ggtccaggcg cttcaggacc gcgccgg 397

<210> 1677
 <211> 372
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-B3

 <400> 1677

 tgctgcagct cgctcgctcg ggcttccgcg ccgtcgctcat cgacaagctc aacaagtcgt 60

 ccgagctggc cgctccgcgc gtcgccgcgc tcgcagggga ggactcacgc aacctctctt 120

 tccacaagat tgatgtccgt gacaagggat cactggaaat ggtttttgct tctacaacat 180

 ttgaagctgt cattcacttc gctggattga aagctgtggg tgaaagcata cagaagccat 240

tactttatta tgacgacaac gtcattggca cgataaatct tctagaagtt atgtctgttc 300
acggttgcaa gaagttgggtg ttctcatcat cagctgcagt ttatggatca cccaaaaact 360
caccctgcac ag 372

<210> 1678
<211> 340
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-008-Q1-E1-C11
<400> 1678

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ctgacggcgg ccgtgggccc gtcgctgtac accaacggca ccgggtgcgg cgcgtgctat 120
gatctcaagg gccccagggt caccgtggtg gtgacggcca ccaacgaagc cccgccgccg 180
gtgagcgggc aaaagggcga gcacttcgac ctaccatac cggcgcttct caagatcgcc 240
gaagagaacg ccggcatcgt gccatcacc taccgcaacg tggcgtgcga aaggaaaggc 300
ggcatccggt acacgatcac ggggaaacag cactacagcc 340

<210> 1679
<211> 295
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-008-Q1-E1-C12
<400> 1679

atgcaagcct ctagcatgac gtcgaggtaa accagcagcc tccaataaaa gccagcacat 60
ccaaataaaa ccgagagacc tcagccctca ggcaagccga ccgccgacgt accaccgcgc 120
caacccgaga gaaagatgga gatgatcaag aggatcctca tcgccgcgct cctcgtagtc 180
gccgtctcgg ccaccgcagt gctggcctcc accgaggccg ccgccgccgg cgccccagcc 240
gcctccgagt cgtcggcgtc cgccgaagcc cccgctggcg ccgccggcgc cggcg 295

<210> 1680
<211> 321
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-C3

<400> 1680

gagcgatcga gagatanata tagatgatga aagtgggatac atcgtcagcc gttctcttcg 60
tgctagccct gacgctagtt tgtgccccgc tgatagcaga ggcaaagaag aagagagtcg 120
ccgccgccgc cgccgaggag aagaagggtgc aggacaactt ctgctcgacg ctgtgcgagg 180
gcangaaggg gatggacctg gtgggtgtgca aggagtcttg cgacctctca cagcgctcca 240
acctggtgct gtacggccgg attcagtgcaggaggcaagtg caccgagcag aacggcatca 300
ccgcgccgca gatgaaagtg t 321

<210> 1681
<211> 230
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C4

<400> 1681

gtggaggtgg aggatacaca cggggggcgc caccgacgaac gccacgccga ggtcgtttcc 60
gagaagatta tactggagga cgcgccggca gttcttgctg ataccgctgg cccccccgc 120
accacggagg tggaggtgga gtccttcagg aaaggagcgg cgccgggttcc agtactcatc 180
ctcgttgctg ccgcagtgga cgacgtggtg gccgacaacg ttcttgcccg 230

<210> 1682
<211> 350
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H9

<400> 1682

ggcgcggtgc tgcgttcgtg catccaccgc caccgttctg ggcaccatgt ctttcaccgg 60
cacgcacgcc acgtgtccgg cgtgcgactg gaccgtccac gtcacgccc tcttcacggc 120
cgtcggttgc atctaccata tcggatgctt caagtgcagc taatgcatcg gggtcctctc 180
gatgtgcagg tctcctcca tggacggtgt gctgtactgc acgacctagt tcgatcagct 240
cttcaaagag actgggacct tctcctacac cttcacgcca tctgccatgt caatagatga 300

cggtgaagtg acatggtgct caaccaatct gtcgtctgca ttttctggtt 350

<210> 1683
<211> 386
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-A2

<400> 1683

ccacgcgtcc gacttcgtaa acaaccggga agtgtccggg gtcacgccgc tcaactccaa 60
gttctccac atgaacatgt tacggtgcaa ggacatgctg attaaggact ttaccgttac 120
ggcgccccggg gacagcccca acacggatgg catccacatt ggcgattcat ccgggatcac 180
catcaccaac accgtcattt gcgtccagca ctactgcatc tccatcaggc ccgggaactc 240
caatgtgaac atcaccggcg tgacctgtgg ccctggccac tgtatcagca tcggcagcct 300
aaggcggtag acngacgaga aggacgtcac agacatcaac gtcaaggatt gcactcttaa 360
gaagactatg ttcggcgctc gcatca 386

<210> 1684
<211> 301
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A3

<400> 1684

aacatggcca agtccgcgc ccccggtcag gccaaagtgt agatggatca tcggagtatg 60
tgttcggggc ttcgggggtgc cactgccact gtgccaggcc gcgcggtttc gctgtgcgcg 120
tgctcccctc atcatcttgt caccgaagtc attttttttc tcaactgtctc tttcgtttgt 180
gcaagaaggg acgagcaaag taccacccgc agcggattac taaattgtct aattacgcag 240
ttgtcgtgtc gaggttacta aagatgacca caggtaacct atgggtgtcc ccggtcggtc 300
a 301

<210> 1685
<211> 455
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A4

<400> 1685

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ttaataaatt caagaatttg gataaattaa taaatccaaa caacggtggg ttcaaggtgg 120
accaaccaa ggccaacggc aatccatcca aaaacccaac ggcaacgctg gtcaggcccc 180
tttggccctc caatgggggg cgatcacaat ctgcaactgc caaggccgcc ttcaatcggg 240
aaaaatcccg ttgccggaga agaagtcctt gttcctcaac gccgccagcg cgtcgccccg 300
ggcactacca gcagcaacaa ggcgggcgct cctcgacga agcgcccgcc gtgagcgtca 360
cgccgaggac ggccacgaat aagcagcagc tgcacctgcc ggcgagcccc cgggcgtgcc 420
tctgctcacc aaccgtgcac gccggctcgt tccgg 455

<210> 1686

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A5

<400> 1686

gagcgatctc ctctccctct cctctccga tccattctcc agcgacgca agttaacatg 60
tccgaccggg caaagatgtc gtggcaggcg tacgtggacg agcacctgat gtgcgagatc 120
gagggccacc acctcgcgcc ggcgcccatc gtcggccacg acggtgccgc ctgggagcag 180
agcacggcgt tccccgagtt caagaccgag gacatggcca acatcatgaa ggacttcgac 240
gagccagggc acctcgcgcc gacaggcctg ttctcggac ctaccaggta catggtcac 300
caaggcgagc ctggtgccgt catccgtggc aagaacggat caggaggcat caccgtgaag 360
aagacagggc aggcactcgt ggttggcatc tacgacgagc cgatgacgcc tgg 413

<210> 1687

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H4

<400> 1687

gggcaaccgc aatttcctcc gtcccccccc tccgattctc ccctggccca aggaaaagga 60

aaaggaaaag gaaagaaaaa aaaccgcgcc gtccgcccaa ggaaaaaagc aaagatccgg 120

aaccactgaa ccgcgctacg cgtggtcgtc gtccggagcc acgcgtggcg ccgcggcgat 180

gggcaactgc tgcgtgaccc ggccgttttc tggcaagcgg cgaagcggct cccgcgggtg 240

cgctggcggg aaccgttgcg ggcgccctcg cggcgccaac gtgcgggtcct gctccacgct 300

gtcctccatc tccgacgcgg cgcgcacgcg cgcgca 335

<210> 1688

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G11

<400> 1688

accgccccgt ccaggcaact catatatttc ttgacagaat gtttcatcct gttgttgctg 60

tggattgtgc agtgacattt gttcttgctt ttggagaggt tataccgcaa gcaatctgta 120

ccagatatgg cctagcagtg ggtgctaact ttgtatggct cgtacgcatt ctcatgggtca 180

tttgctatcc aatttcttac cctattggga aggtcctgga ctgtgctcct gggcacaatg 240

agtctgcact ttttaggcga gctcagttga aagctctagt ttcaatccat ggcaaagagg 300

ctggcaaggg cggagagctt acccatgatg agactacaat cataagtggg gccttggacc 360

tgaccgaaaa gactgctgca gaagctatga cacctattga gtcaactttc tcaactagatg 420

tggattctaa gttg 434

<210> 1689

<211> 425

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-007-Q1-E1-G12

<400> 1689

gaccacgcg tccacaagtg tgatcatccg ttgatccatc ttgctaataa gcctgcgtgc 60

ccttcgttct tcctcgtctc gatcccgacg acgctccgtt cggtccggc aaaccacatc 120

aagtcgcgat ggagatgaag aaggtcgcct gcgcgcgcct cgccgcgcgc gcctccgcca 180
 ccgtgggtcct cgccgcgcgag gccccggcgc ccgccccccac cagcgcctcc tcggccgcgt 240
 tccccggcgt cggcgcgcgtg ctgggggcct ccgtgctctc cttcttcgcc tactacctgc 300
 agtaaaatta aaggaggatc ggagggagag gctgctggct gccattgcct gtaatcggtt 360
 ggattccgtn tatatatata ttaagtact ttaaattggg tctgaacatg tcaattggat 420
 cattc 425

<210> 1690
 <211> 266
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-G6
 <400> 1690

gacccgagcg tcaacgcagg gtggcgtgca cgaagcaggg cggcattcgg tacaccatca 60
 ccgggaacaa gtacttcaac atggtgacga tcaccaacgt gggccgcgcc ggcgacagcc 120
 cggcagtgtc agtgaagggg accaagcgcg ttaagtggac cgagatgaag cgcaactggg 180
 ggcaagtgtg gcacaccggg gatgaccgca catgcgagtc gctgaagtcc ccggtgatga 240
 acagcgacca ccgcagacgc cagcct 266

<210> 1691
 <211> 430
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-H11
 <400> 1691

cccgcccgtc cgaccacgcg accgccggtc cttcctgcgg cagaaggaca acatgctggt 60
 gctgttcgag gaggagtccg ggcggccgga cgcgatcatg atcctgacgg tgaagcgcga 120
 caacatctgc accttcatct cggagcggaa cccggcgcac atcatgtcgt gggagcgcga 180
 ggacagccag atcacggcga aggcgaacgc cgacgacctc agggcccggg cggcgtggc 240
 gtgcccgcgc aagaagctca tccagcaggt ggtgttcgcg agctacggaa accccgcggg 300
 catctgcggc aactacaccg tcggcagctg ccacacgcca cgcgccaagg aggtggtgga 360

gaaggcgtgc ctccgcaagc gcgtctgcac gctgcccggt ggcgccgacg tctacggcgg 420
cgacgccaac 430

<210> 1692
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H2

<400> 1692

gatcttgcca tggtacaacc agcaagcaga aataagggtca accccgggca atatttcgac 60
aaggaaaagg aggagaaccc cgaggaggac gctgcgcccg tcgacgtctc cgcggacggc 120
gtgtatgtgc ctctcaagaa ggagaaatcc ggcgaagacg ccacgccggg cgacgtctcc 180
aacaccaccg gcaaatacgt atcttcttct tccaaggcaa acggcaagcc cacgggaggt 240
cagcccgcag agagctccac caccgccacc gcggatgcgt acgcgtctcc aaagcagaaa 300
gtcgtcagca gccagcccat ggccagcgcc gtcctgacg agcttccgct ggccggccaag 360
agctccaaca cctcggacgc gtacgcattc c 391

<210> 1693
<211> 145
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E11

<400> 1693

cgcgtctcgc cctcgcctc ctctctctc gtcgcctccg cggcgtggg ttctgccgcg 60
gtggccccgg cggcctctcc ggccctctcg gcctctgtgc cgttgggggc gcccgctcgt 120
tcgcctgcgt gtgtccgggc gggcc 145

<210> 1694
<211> 393
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E2

<400> 1694

ggccccttgg ccggcccctt ggggccgaag gcaacaagcc caactgggcc aaaaaactgg 60
caagccaagg gcttgaaccc ctccaacttc aaatcaagtt catgggtcgg gaacagacaa 120
gggcgtcggc agaaatgcat cggcaagtca atcggcttgg caaaggagct ggcgtgcatt 180
tgaaccaatt gactaacatg catatattat gtactaggtt tgtgccctg cgttgacacg 240
gaagttaaaa attagtataa aacaaagata cataacgata aatatcacta tgacattcaa 300
aatccatgtg gcaaaatata actgtaacca tctatgattg tgcattgcga cgccacacaa 360
attattcgat aaaatattag caattgggaa aaa 393

<210> 1695
<211> 422
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-007-Q1-E1-E3
<400> 1695

gcatccggtc cgcaagggcc ccgccggcga actgcgctaa ccgtcctaac cggagagcaa 60
cgggacctgg aaattcccaa gcatcggcgc cttccagtgc aacgacaggt acatgcgtag 120
ccgcctgcaa gcggcagcgg aggcngccgg caagcctgag tggggccacg gtgggcccac 180
cgacgctggc ggctacaaca actggccgga ggacaccgtc ttcttccgcy ggcacaacgg 240
tgggtggagc accgagtaag ggcacttctt cctgtcgtgg tactcgcaag atgctgctgg 300
agcacggcga cctcatcctg tcggggcgca cgtccgtgtt cggcgccgcy cccgtggagg 360
tctccgtgaa ggtggccggc atccactggc actacggcag ccggtccac gccccggagc 420
tc 422

<210> 1696
<211> 410
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-007-Q1-E1-E4
<400> 1696

cgaccacgag ttcgccctgc gccggcgtcg cgtcaccgcy ttctcgggc tctgcacga 60

gctccgggac cgccagctgc agcggctgga ggctgctgcc ggggtcgccc tcgaaggcga 120
ccagctgacc cctttcggtc ggagcctctt catcggcgca gctggcggcg gcgatcatgg 180
cgtggcgctg ggcgactact tcctcgcccc cagcctcgac gctctggtgc agcagctcgc 240
cgagaacgac gcgggacggc acgggacgcc gccggccaag aaggaggccg tggaggcaat 300
gccgaccgtg gaaatcgccg gtggcaatgg caacgatgac gacacggcca gctgccccgt 360
ctgcctggag gactacgcgg cggcgagcg cgctcgggag attccctgca 410

<210> 1697
<211> 410
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-007-Q1-E1-E10

<400> 1697
gtccaggcgt cggacgcggc aggccgcacg ccgtggtgat gccgtaccgc ctgcagggcc 60
acgtgatccc ggcggtgcac ctggcgctgc ggctggccga gcgcgggttc gcggtcacct 120
tcatcaacac ggagtccgtg caccaccaga tcggcgccgg cggcgacatc ttcgccggcg 180
tgcgcgcgcg ggggggaggg acgacgacgg aggagctgga cgtgcggtac gagctggtga 240
gcgacggctt cccgctgggc ttcgaccggt cgctgaacca cgaccagttc atggagggcg 300
tcctgcacgt gccccgggcc cacgtcgagg acctcctccg ccgccgcgtt ctcgtggacc 360
cggccaccac gtgcctcgtc gtcgacaccg tcctcgtgtg gccggccacg 410

<210> 1698
<211> 415
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-007-Q1-E1-D11

<400> 1698
gaccgcgccg tccacattca agcacctcct cctccccgcg cggccaacaa ctcagccgcc 60
gcaaccgcca catcagccat gggcgctcgc gcaaccaagc ccaagacgct tgaggggcag 120
gccccagctg aggccgcgct ctccacacc aaggttgcg cccaggccac tccaatctcc 180
gttgaggttg cggctgatga acaggtagct gagaaggtgg tgggtggagga gccggctgcg 240

gcggccgacg ttgagcatca gaaggctaata gaggtggtcg ctccagagggc ggccgtcgcc 300
gagcccgatc acaaggagga ggaagccgtg gagaagaccg tcgtcgagga ggagaagcca 360
gcggcagccg ccaatgcaga ggaaaaggtc gccaacgccg ccgagaacac gacga 415

<210> 1699

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D12

<400> 1699

gtccagctag ctaaccagcc agccagcagc cagcttgctc gccgcgcccg tccttcttcc 60
tcgcctccgt tccattccgt cccgccctcc accgccgccg ccgcattcag ggatggagat 120
gaagaagatc gcctgcgccg tctctgctgc cgcttcggcg gccaccgtgg cgctcgccgc 180
ggaggctccg gctccggccc ccaccagcgg ctctccgcc gtcgcgcccg ccgtcgggcg 240
cgccctcggg gccgcgctcg cctccttctt cgctactac attcagttag ccggccgggg 300
cgcccgaggg ccgaggaaga gaccaacggg agagagagtg acatggctgc gcgcattccg 360
atgctggtggc atgttttttg attcgacaca cttttttgtc ccccttttct tt 412

<210> 1700

<211> 373

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-007-Q1-E1-D3

<400> 1700

aaggcttccg aaaactcccc cggcgccaac aacaaccgt cgggttgccg ccggcaaccg 60
ttaacccttg actttccccg gggggccggg gaaaaaaaaag gcagaaggag gaggcacgga 120
gaggacgaga caggatgtc ggggttcaggc agatgccgtg gtcgtcgccg caggagcagg 180
agcaagcgcc gtcggagcag ctgtgcgagg ggggtgcneg cgtcgtggcg gcgcgccagg 240
ggatggagaa gccgctgacg gctgtggcg aggcgttcga ggagctggcg cgcggcatgg 300
aggccgatgg cggggagctc cgctcgtc cttcagcga ctctgctc ctcgtctccg 360
tgctcttcag cag 373

<210> 1701
 <211> 442
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-D4

 <400> 1701

 gacgcgtccg accacgcgtc cgcgcgctcc ccgtccttcg gtaggtgcat tgcttcggtg 60
 gtcaaccatg ggcgagcaac cgggtggccac gatgacaact aataagcccc tcctcctcct 120
 cgccctggcg tccgcgctcc ttgggtgcggc gccggccgcc gcgaacgcgc ccggcggggc 180
 gttcagcaac tgggtggcga tgaaccagca gagctacgcg ctgtacgcgc agaagtcctg 240
 cggggacggg ggcaaggagc ccctggacaa gaagctgtcg gaggcggaga agaagaaggt 300
 cacgtacgtg gtggacccca gcggcaaggc cgactacacc aacatcaccg cggcgctgga 360
 ggatatcccg gtgagcaaca ccaagcgcggt gatcctggat ctcaagcccg gcgctcagtt 420
 ccgcgagaag ctgttcctga ac 442

<210> 1702
 <211> 113
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-B4

 <400> 1702

 tttctgcgat gtgatcgagc atttcttgca agttgcggga ataagccatt ccatgcactg 60
 cgagtctggt ggttatgccc cgttctagca cgatggcaag tcttaacggt gct 113

<210> 1703
 <211> 440
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-B9

 <400> 1703

 gaccagggcg tccgaaagaa gtcacctaatt tctttcgatc gaattaggcg ccttcttcgt 60
 cccacgtccc gtctttatctt gtaatctgaa gcttacagga acatttgagt ggatcatgga 120

cggattggta ggccctcttga aagtccgggt ggtgaggggc atcaaccttg cctaccgcga 180
 cgcaagaggc agcgatccgt atgtcgtcct acgacttggc aagaagaaac ttaagacgag 240
 cgtgaagaag agatctgtga accccatctg gcacgaggag ctaactctga ccgtcacaga 300
 tcccagccta gctctgaagc tggaggtgtt cgacaaggac acgttcagca gggacgaccc 360
 gatgggggac gcggagatcg acgtggcgcc gctggtggag gcggcgaacg cgagcccgga 420
 agcgagcctg aggaacggcg 440

<210> 1704
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C11

<400> 1704
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 cgatgacgcc ctgcgccagc gcccgcgggg gctcgtgcag gtccgggagc gggatcaggg 120
 cccgctgtcg acggggcacc agcacctgca ccaccatcac caccagctgc ggcggtcggc 180
 ggcgttccca ccccgccgcc cggggccggg gcgccgccct cctcagcgct gcgaaagcga 240
 cctcaacatc agggagcacc gctcctgcag cgaggtggcc ggcggcaccg cggcgggctg 300
 cgccgctgtg tgetgctgct tcccctgcgt catggtggag gtcgcggtgc tcgccacggg 360
 gcgcgcgccc gcggcgctgt gccgcaaagc cgcccgcgtg cgcaagggcc gcatgcgctc 420
 t 421

<210> 1705
 <211> 359
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C3

<400> 1705
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 agaggcgggg ccagaaagga ccgggggcgc cgagggtcgg cggccccgcc aaagcccgtc 120
 agcattgacg tgccccgcat acccttcgac gagctcaaga ggatcaccaa caacttcagc 180

gaccgcgccc tcacgggga gggctcctac ggccgcgtct acaacgccac gctcagcgac 240
 ggccgcgccc ccgtcatcaa gaagctcgac aacagcgccct cgcagggacc cgacaccgac 300
 ttccgcgccc agatcgcgaa tgtccccaag ctgaagaacg agtatttctt ggagctcct 359

<210> 1706
 <211> 340
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-C4
 <400> 1706

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 catggccttc ctccgcttca tgggggacga gaacgaggcc aagaactaca gctacagcct 120
 cgaggtcggc gccaacggga ggaagatggt gtgggagggc accccaagga gcgtccgcga 180
 cagccaccgc aaggtgaggg acagccacga cggcctcctc atccagagga acatggcgct 240
 cttcttctcc ggcggggacc ggaaggagct caagctcagg atcaccggac ggatctggaa 300
 agagcagcag acaccagacg gcgcatgtac tccaaatctg 340

<210> 1707
 <211> 416
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-B10
 <400> 1707

gaccgcgccc tccgaccacg caaccggcct ggccctgggt ggccgcctcc gaccaccgta 60
 cgctctccac cgcgtcgccc cgggccggcc tctgcccagc ccgggctgcc tgcgagggct 120
 tctgatggcc ctcgacgccc tcctttctct ctagtgccca gctttattgc agatccagcc 180
 ctctgatcct cgtcttcttt cacctctcca acatgaaggt caacaccaag atcaagctgg 240
 agccggtcat ggccgcgtcg tcgtccctgc cgcggagcgc cagcgagcta cccgaccgc 300
 cgtcaccgtt cagctccaac acggcgacc acccgtctc cgtgcccacc acacctaggt 360
 tgtccttctc gtgctcgctg ttccggccaca tgggtgaaccc gcccaacgac acaacg 416

<210> 1708
 <211> 221
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-006-Q1-E1-H3

 <400> 1708

 aataaatccc cggccccaaa gttaaggcgg agttcaagca atttcggaac gggaagctcc 60
 aaccctccaa ccaccggggtt gaccgccgga accgcaactt caacattcaa cccaaggcc 120
 agccacaagg aggaaaccgc caaggtggcc ttgcggaaaa cccccccaa ggactgcaac 180
 aagttcaagg cggacaggaa cccccccggc ttctggctca c 221

<210> 1709
 <211> 99
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-006-Q1-E1-H4

 <400> 1709

 cttcaaccgg aaccaggac aattgcacgg cttccaacaa gacggtcaac ttcacgacc 60
 tcctcacggc cgacggcgcc atctaccata agacatgct 99

<210> 1710
 <211> 420
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-006-Q1-E1-H6

 <400> 1710

 gtccagctgg agcgggaccc gaggaggagg ctcggtacg ccggcggcgc cgacgaggtc 60
 cgggccacc cgttcttcgc cggcgtcgcg tgggacatgc tcacggaggt gtccaggccg 120
 ccttacatcc cgccgccggc cgacaggac ctgcggacg tcgaagggtt cgacgtgagg 180
 ggccacttca aggaccttca ccagccgccg cctcccaagt ccgcgtcgga gtcgtcctcg 240
 tccgagttct cgacggagtt ctgactgtga gtcgggcta gcttcttttg cgctttggtc 300
 ctcggtagat tactatattt gtaccagagg gtcaagggtg tcggtactgt acatacatgg 360
 agacggggat ggtgctgtaa attcgacgta gagttggtgt ggttgtgcaa acattttggg 420

<210> 1711
 <211> 279
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-H8

<400> 1711

gagatagata cgcaggaccg cgggcgacta tcgacgaggg aggaaccaga taccggcg 60
 cgggtgatcga tgggtccgcg cagctcatcg gcggcgacgt gcctgtgcct cgctctcgcc 120
 gcggccacgc tggcgctggc ccacggcgcg caaggaggag gaccatcggc atcgggcgcg 180
 gtcttggaaca aggtcacgga cgagaccttc gtggacatcc agatcgactg caagcctgca 240
 tgccggatcg tgctgggact gtttggggac accgttcct 279

<210> 1712
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A10

<400> 1712

ctgagcctgg aggagatcga gtcgaagatc ctgaagtaat taaaaaccgt tcgtgggac 60
 acaagcccca tttggagata tgtaagtagc gatgccatct tcaaaacggg cgctcgctca 120
 ctcgtaggat cggagccaaa gctttcagac atgggagtag atatgcaaag ggcacgtctc 180
 ggtgtaaagc ttggacatct ttctcttata ttagcgtagt gaatatttcc gaacatactt 240
 ggtaaattac atctgcagtt gagtcataat cagcctctg tagactgtag tccactgtga 300
 gctactgtag tagtatgcat gtcactagta aaagctggta agctgtgcga tggactgatg 360
 gtgtagactt gtgcagttgt gctctcataa tgggtgggcat cagatcctgt aaa 413

<210> 1713
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A2

<400> 1713

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 gggcaaaaaa ggattgggcc taacccgcc aacccgcca tttgggtggag aaccgaccgg 120
 gtccgggtac ttaaatacct aaattttgac ggcactcccg catgctcaaa ataatactaa 180
 ctgacagcgt gagacagaac tggctgctct gtcggacctg ctagcccaat gatgggtgct 240
 gtggagagga agactcatga caatgaacgc aagcaatggc caccgacagga ttgttttagaa 300
 ccatttctgt tacaacgttc atgatatctc tctcactcac tgctctcatc tcattaagta 360
 ctagctatcc aatgcaatgt ttccacactg ggcagtcata tcaccctggt ttgg 414

<210> 1714
 <211> 379
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-A3
 <400> 1714

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 aggggaaaaa acgtacattc acccggcggc aataatggcc tcggttccgg ctccggcgac 120
 gacgaccgcc gccgtcatcc tatgcctatg cgtcgtcctc tctgtgccc cggctgacga 180
 cccgaacctc cccgactacg tcatccaagg ccgctgttac tgcgacacct gccgcgccgg 240
 gttcgtgacc aacgtcaccg agtacatcgc gggcgccaag gtgaagctgg agtgcaagca 300
 ctccggcacc ggcaagctcc agcgcgccat cgacggggtc accgacgcga ccggcaccta 360
 cagcatcgag ctcaaggac 379

<210> 1715
 <211> 412
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-A5
 <400> 1715

gggccgaccc aaacgtccag ccgaaggcct cgtgccttct ctccctccct ggcattggagg 60
 aagtagctgt ttgcctatg atcgttgccg ccgtagtgct ggacaacaat ggcgctgacg 120
 cggctcctc cactgccatc cctagcgtaa caataagcct aaaagaaaaa gaaaatatca 180

atggggatgt tcccacgatt acctccgccg caaacaacga agaagaagcg ttgttcaatg 240
 tccgagaatc caacaaggac gattgccatc gcttgacgat ggaatgctcc actcccgctc 300
 cctccagtag cctttccact cgcagagaag cgcggggcgt tcagcctctt caaggcgatg 360
 ttctgttctc tcggccggag caacgacagc attaagaaga caaacgacga ca 412

<210> 1716
 <211> 294
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B1

<400> 1716

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 gctcagcgcc gtgatcgga acatggagac gtgcatcgaa gggttccccg atgaagagtt 120
 caagaccaag gtgaacgagt cgttcaccga ggggaaagag ctacagcaaaa acaccctggc 180
 gctcatcgag aaggggtcgt cgcgcctctc cgcactcagg ggcgtctcaa aacggcgttt 240
 gctggaggac gagaagggat tgcggccgtg gccgcggcct cccaagccgg ggcg 294

<210> 1717
 <211> 66
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-H12

<400> 1717

gtccggaatc tgcgggaggt cctaacctgc acagatatag accacgagca agcttcctac 60
 acttcc 66

<210> 1718
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G3

<400> 1718

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ggctccgaca cctacgaacc tccaaagcaa tcctgggggg ccaaccggaa ggaaggcaac 120
 cacaagccga ttaaaggaac caacaacgtt caactcacia ccaaggaagg actaagacgt 180
 ctacgacgat gtcacccccg ccggctggaa gcccaacact gcctacaccg ccaaataaac 240
 taaccaataa ataataagta tcaaattggca cacttgatag acctttatatt tttatttttt 300
 atttaataaa aggatataag gagtgtgaca aacaacaaca cgaatattgt attgtctatg 360
 tatctcctat atatgcaatc ccaattttat catggccaca ttttaaaatg gaatatatga 420
 tatatatatg tac 433

<210> 1719
 <211> 316
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-G4
 <400> 1719

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 gtggaccccc agagcgtgcg gttcatggcg cgggagatcc tcacccctccg ccgcctccgt 120
 ggccacccca acgttgctcg cctcgagggc atcatcacct cccgctcctc tccctccatc 180
 tacctcgtct tcgagtacct cgagcacgac ctggccggcc tcagctcctc ccccgacatc 240
 accttcaccg agccccagat caagtgctac atgcgacagc tgctggaagg gctggcgcac 300
 tgccatgcc cccggg 316

<210> 1720
 <211> 423
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-H10
 <400> 1720

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 gacatggccc gcctcggcgc cggcgccgtg ttggcgctcc tagtggcggt cgcgcggtg 180
 gccgcgttcc tcgcggtgcc ggctcggcg aagtccgggg agctgagcgc gatgggggtt 240

ctggcggcga agggcggcag cggcgcgggc ccgcagaagt gctcggggcgc ggtggggcgag 300
 tgcgacgtgg acgagggcgga ggagctcggg ctgagcggcg gcggcctcgg ctccgacgac 360
 gcgggtgcggc ggacgctggc gcagcggaag ccgaccaacc ggtacatcag ctacgcggcg 420
 ctg 423

<210> 1721
 <211> 373
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-E2
 <400> 1721

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 gccggcgggc ccgagtccaa ggtcttctac ctcaagatga agggtgacta ccacaggtac 180
 cttgctgagt tcaagtcagg tgcagagagg aaggatgctg cggagagcac catgaatgcc 240
 taaaaagctg ctcaggatat tgctcttgct gatctggctc caacccaccc catcaggctc 300
 gggcttgctc tcaacttctc agtgttctac tacgagatcc tcaactcccc tgaccgtgct 360
 tgcaaccttg caa 373

<210> 1722
 <211> 309
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-E3
 <400> 1722

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 cggggatgca gatgatgcan gtgcagcaag cggcggcggt gctgctgtgc ttggttgtgt 120
 tggcggcgtc tacgcgggtc gcgctgggca actgccgca cgactgcatg gctgcatgca 180
 acggctggac catcgtctgc cagctctcct gtgccagcgc atgctacgga gaagtcggga 240
 tcacaacctt aagtacgten gctgtattag cganagcaga agcgctgca tcaagcacac 300

aagcaacac

309

<210> 1723

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E4

<400> 1723

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acaacttccc tgggtggcccc ggcgggccgc aatgcaaccg gtggccgcca atttcgcaaa 120
ggccggcaac ccaaaccccc tgaccctgac cgcccccttg gtacacaaca acaacggaaa 180
tttcacggcc gggccgtgga aacaagccac gccaccttct acggcgggag ggacgggtcc 240
ggcaacacgg cgggcgcggt cggtgtacaag gacacgcgag cgcaggggta cggcggtgag 300
acgggtggccg tgagcacggt gttgtttggc gacggcgagg cctgcggcgg gtgctacgaa 360
gtgcggtgag tggacagccc cagcgggtgc aagcccgagc cggcggcgct ggtggtgagc 420
gcgaacgacc tg 432

<210> 1724

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F4

<400> 1724

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attaagttaa agtggaaaat tgccaaacaa aattttaaca agaaggggga aatatacaaa 120
agaaaatgcc aaagccatca atggacaaaa tttgaacctt atggccctcc gtcaacctca 180
aggaataatg caacctgaat tgaagccaga gaattttctc ttcacaacaa gagatgaaag 240
cgctcctatg aagttgattg actttggtct gtcagatttt attacaccag atgaaaggct 300
caatgatatt gttggaactg cttaatatgt tgctccagag gttctacaca gatcatacag 360
tatggaagc 369

<210> 1725

<211> 230
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-006-Q1-E1-C8

 <400> 1725

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 tgccctcttt cctctgacca tcgacagggg aggacgggaa cgtcacgtag acttcaccct 120
 gtagggaaat agtggcctct gattccggca tccggacgac tgattaccgc tcgtcgtaa 180
 tctctatgcc gaggtggtcc tctatcacca tgtgtcgcgg actgaccact 230

<210> 1726
 <211> 257
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-006-Q1-E1-D11

 <400> 1726

 tccggccggc gcatacagct tgtgcgtctg gctgtctccg gtcggtcggg cttgtcgtgc 60
 gtccctccagt ccgttgacgg tcatgccctc tagcggttgg tcggtgttcg ggagacctgc 120
 cagagggatc gggagacaca gatgtatacg ggtatggagt gcctgctggg gctgctcaag 180
 gtgcgggtgg tgcgaggagt tgacctggca atctgcgacc cgctcaccca cagcagcgac 240
 ccctacgtcg tctctgc 257

<210> 1727
 <211> 367
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-D2

 <400> 1727

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 acaaggacaa ctacttgacg gtggaaaaag cgcgctgcgt actgcagagc ctcgttacgg 120
 gggagttctc ctatgctacc tcacatgcc a gttcttgat gaaggctgat gtgaaccatg 180
 acggcaaaact gtcgctggag gagatgctag acgactacat atccttctac agcaccgtgt 240

atatggatga tcattacgcc agtgaaggtg aagtagatag tgattcccg c gacgagctat 300
gagcagttaa gccaggacag gacagcaagt cggaggttct ttactttcaa atacactang 360
attttgc 367

<210> 1728
<211> 409
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-D3
<400> 1728

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tggccttggg cgccttcctt gggcgctcg tgcgcggcgg gtcttgcggg cccccaaagg 120
tgccacccgg ccacaacatc accaccagct acaacggcaa gtggctcacc gctaaggcca 180
cctggtacgg tcagcccaac ggtgccggcg ctctgacaa cggcggtgcg tgcgggatca 240
agaacgtgaa cctgccaccc tacagcggca tgacggcgtg cggcaacgtc cccatcttca 300
aggacggcaa gggctgcggc tcatgctacg aagtgagatg caaggaaaaa cctgagtgtc 360
cgggcaatcc agtcacggtg tacatcactg acatgaacta cgagcctat 409

<210> 1729
<211> 394
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-D8
<400> 1729

cgcacaagtc caggacgtct cagcatcatc ttctgttgca tcagggaaca aattctgcaa 60
gggtggtgcc tgtgatttct ctgagtccag taactcctcg agagatgcca aggagagatc 120
cacgtccatg aggaagctta taatcgcatg gatgctttgc atcatattca tgacggtgga 180
agtggtcggg ggcacaaag caaacagtct tgccatctta actgatgcgg cgcaccttct 240
ttctgatgtg gcagcatttg ccatatcgtt attctctctc tgggctgctg gatgggaagc 300
aacaccgcag cagtcatatg ggttcttccg gattgagatt cttggtgcct tggctccat 360
tcaggtcaga tggccacttg ctggcatact ggta 394

<210> 1730
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D9

<400> 1730

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gacccaagcg tccaggaggg gacacacaca cacacacacc gtctccgccc gcccgccgcg 60
acgcgccatg gctatggctc gctccgtcgc gcacctcttc tttcccatcc tccttatctc 120
caccgcgccc gccgtgctgg ccataccga cgcgcgggc ggccccggat acctccagga 180
ggcgtgcaac aagacgtgt tccccaaggt gtgcatgcac gcgctcaagg acaaccaga 240
gtgccaggcg gagacggcgg tcacgccgcg ccggctggcc gagctgctcg tgtacgtgtc 300
ggccgaggtg ggcataccg tggccgcgtt cgcgcaccac gagctcaacg ccatcaagga 360
cgacgacgtc ccgtacaagt gcatcgacac ctgctccgag gacat 405
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<210> 1731
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B12

<400> 1731

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tgggccagtc gatagacatg gacatgcgtc acgtcgtcag atccgtcttc tgcaccgttt 120
ccttggaat cgccgtgcta ggactctgtc acggttgatg tgcagtgtca tgccctgcggg 180
gttttgcta tgtctagcgt gcggatgaat gcaagaagag ccttgacctg agcaatccac 240
acattgagca cgtcagacgt cgctgtcagt attgaatatt acttgacctg ttgacacttt 300
tggcgagatt tgtagatttt acagtatcat ggctaccgta ttactcagta gcacaggtga 360
tgttctttgt atatttgtgg t 381
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<210> 1732
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B3

<400> 1732

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ctacaccgag gcttattgaa aacaaggatga ggcaatgctt cgatccaagg ctcggaaca 120
aataccctca aaaggctgta gccaaagatgg ctgctgtggc cgccctctgc gtgcaatacg 180
aaggatgaatt ccgtcccaac atgagcatcg tcgtcaaggc tctgaacccc ttgctgcaca 240
gccggtcttg caaccgccct actgcctcgt cggcctccca cgctgccgca gcagcatagc 300
gatccggact gtgatttccc atcgctgcga caactttggg ttcacgaaaa acgaccgtct 360
tgtggagcgt tgggtgttgc gtgtcgtgac tgccaacgcc ttggc 405

<210> 1733

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C3

<400> 1733

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aagaagcgct ccgctacgca aagctccgc tcaagttgca cggggatgcg gcggaaggac 120
cggccggacc tcgcaaccgt cgtactgccg gagctcaacc gggttaaggaa cctcggccac 180
gcgtacgagg caccgatgag cgccgtcggg accaacagtg gaagtggcga aagtaatgac 240
caggtcagcg ggagctcgcc gacggcgggt ggttcatgga gaacggcgga gagctagcgg 300
gtggtacggc gtggccatga gtcagttaga gagcgagctt gtgatgggga gagttccttt 360
gttggacgga gag 373

<210> 1734

<211> 108

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B1

<400> 1734

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gtcgtagttg accagcacta gccactgcag acgatgtcgt ggcagacg 108

<210> 1735
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A10

<400> 1735

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ccccgccgg agaacgacca cgtgggtgctc atcggagact ggtacaccaa ggaccacgag 120
gtgctagccc gccagatcga cgccggcaag ggggtgggcc gcccgcggg cgtgctcatc 180
aacggcaagg ggggcaagga cctggacgcc gcgcctgcct tcaccttcga cgccggcaag 240
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ggccactaca tgaagctggc cgaactggag ggctcccaa acctgcagaa cacgtacgac 360
tccctcgacg tccacgtcgg ccactgcctc tccgtg 396

<210> 1736
<211> 370
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A11

<400> 1736

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aggaggtgga cccgacgggg cggttcgggc ggtacgcgga cgtgctgggg ctcggttcgg 180
tcaagaaggt gtaccgcggg ttccgaccagg aggaggggat cgaggtggcg tggaaccgtg 240
tccggtcgcg gtcgctggcc gaccgcgacc ccggcatggg ggagcgcctc cacgccgagg 300
tgcgctcct ccgctcgtc agccacgacc acatcatcgg ctccacaag gtgtggctgg 360
accgcgacgc 370

<210> 1737
<211> 331

<212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-A4

<400> 1737

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 cgcgcaagga ctgcgaccag gtgcacgcag acagggaccg cgccggcgtc ctgctcacca 180
 tcaacgtccg catcagcgac aacctgcgcc ccgctaaacc gctcggctac ctcaaggact 240
 tgccgctgcn catctgcgcc tcgctgctca aacagttgga ctccggacgac gacgacgatc 300
 agtaatagca catctacgac gactatcgat a 331

<210> 1738
 <211> 430
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A9

<400> 1738

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 cgaggtgcta gcccgcaga tcgacgccg caagggcggtg ggccgccccg cgggcgtgct 180
 catcaacggc aagggcggca aggacctgga ggccgcgcct gccttcacct tcgaggccgg 240
 caagacgtac cgctcccg tctgcaacac cgggatcaag gcgtcgctca acttcgcat 300
 ccagggccac tacatgaagc tggtcgagct ggagggctcc cacaccctgc agaacacgta 360
 cgactcgctc gacgtccacg tcggccactg cctctccgtg ctcgtcgacg ccgaccagaa 420
 gcccggcgac 430

<210> 1739
 <211> 247
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F9

<400> 1739

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gtgggagata tgccaagaag gagaccaaac cgatcattgt ccagatttcg agcgtactgg 180
cctactatca cctccaggga ttattccacc ggattttgag ccccggaat ttcccttca 240
aaacagg 247

<210> 1740

<211> 111

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G10

<400> 1740

cgtaaatatg agttaagttt caggagccgg tagaagggtg ccaccagagt gattgcgaac 60
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<210> 1741

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-G11

<400> 1741

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agcgcaagct ccgcggcctc atcgccgana agaattgcgc cccgctcatg ctccgcctcg 180
catggcactc cgcgggcacc ttcgatgtgg ccacaaaaac cgggggcccc ttcggcacca 240
tgaagaaccc cgccgagcag ggcacggag ccaacgcggg actggaaatt gccatcaggc 300
tgctagagcc catcaaggag cagttcccca tcctatacta cgctgacttc tacca 355

<210> 1742

<211> 202

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G12

<400> 1742

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gcgcatagca tgaggattgt ggcgctggcc ctgttggccc tgctggtggt ggcggcggcg 120
gcgcccgtgg ccaccgctga cggctgctac gacgactgct acaagcgctg cgccaacggc 180
aagaaagacc ccgcctgcac ca 202

<210> 1743

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-G2

<400> 1743

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gacgacatgg cccgcctcgg cgccggcgcc gtgttggcgc tcctagtggc ggtcgcggcg 180
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gagtgcgacc tggacgacgc ggaggagctc gggctgagcg gcgggggcct ccgctccgac 360
gacgcggtgc ggtcggagct ggcgcaacgg aagccgacca accggtacat cagctacgcg 420
gcgctgcgcy cggaccaag 439

<210> 1744

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-H10

<400> 1744

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ggcgttggtg tttttgaggc agtgctcttt ctattagctc tggttgtcac ggcaatgaac 180

aaacctgcgg agtatgacag tgatgatgaa attattgcaa ttggacgaag ccctaccatg 240
 cggcagccat tgatccatgc ccaaaatgtg ccggccaccg gtgttcctgt cccaacactc 300
 gatcagcggt caagtagaaa tgatgcctgg agccaaagga tgcgatagat gtatgggtctg 360
 gacacgagcc agttcacgta caaccctca taccca 396

<210> 1745
 <211> 396
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-005-Q1-E1-H11
 <400> 1745

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 caccctgggt tcggcaaagt acctcaagaa agtgcgctc ttctcccgga ctgcgcatcta 180
 cgccgtgggt tccatctccg gattcgacct ccgcatccct tcccacagca cccaagcaga 240
 ccacagcaac ggctgcaacc cctgctggaa cgccgtggta cacttcccc tcccggctgc 300
 cgctgacacc cgcgccctcg cactccacgt gaggtccgc gcccagcgct tatacctggg 360
 cgatcgcgac atcggcgagg tgtttgtgcc catcga 396

<210> 1746
 <211> 371
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-005-Q1-E1-H12
 <400> 1746

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 aattgtggca gaccggggag gacctacat gcgagtcgt gacgttccgg gtgatgacca 120
 gcgaccaccg caaggccacc tcatggcag ttctccctgc tgactggaag ttcggcgctca 180
 cgtaccaggc gtccaagaac ttctaagtag ccactttccc tcctcttctt caacctgcat 240
 gcccgcaagc agccatgcag atgataacat gcatcatgca tgcatattca ttctttcgct 300

catgcactcc gatacgggtgc cggaggttaaa aaaatataaa tcaatgtgca aattcanatg .360
 acananaaaa a 371

<210> 1747
 <211> 281
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-005-Q1-E1-E11
 <400> 1747

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 atgctacaag gtgagatgca aggaaaaacc tgagtgtctg ggcaatccag tcacggtgta 120
 catcactgac atgaactacg agcctatcgc tccctaccac ttcgacttga gcggaaggc 180
 cttegggtcc ctggcaaagc ccgggtctca cgacaagatt cgccactgcg gcatcatgga 240
 cgtecgagttc aaaaggggtgc gatgcaagta ccccgccggg c 281

<210> 1748
 <211> 438
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-005-Q1-E1-E2
 <400> 1748

gggtcgagca cgcgtccgca ccccgctctc gtgcccacca cacctagggt gtccttatcg 60
 tgctcgctgt tcggccacat ggtgaccccg cccaccgaca caccgccgat cagccccacc 120
 aagaagcagg acgacaagcc gaagccgacg ccggaggccg ccaccgcggc gaactacgcg 180
 tcgttggtgt cgccaagcg cctcatgcag cgcgtgccc gcgctttccg ccgcagcagg 240
 tcgcgcgccc gcgtcaggac ggtcaaggac ctgcgcgagg aacgggcctc agtgctcgcc 300
 gccagcaaca aggtctccga tgaagcggcg gcggctaccg cggtgccgcc tgcagggtgcc 360
 agtgccaaga cctccagcag caacgatgcg cgcgacggcg ccatgggcag cgtccaggac 420
 gagccgcggc agcagcgc 438

<210> 1749
 <211> 425
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E3

<400> 1749

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agcaaaccag caatggcccg cgctgcgtc ttctctctcg tgctctctct agccgccgtc 120
gccatggcgc cgttcgcggg cgcggcgcgc atcgacgtcg tcgagggcag gtccatggcg 180
tccgcggacg caccggaggc cgcggccgac gctcccgtc ctgctcctgg ccccgactcc 240
tctctgaccc cgctgcgggc accctccagc agcagctctt ccgactagcc gcccggcaga 300
gatatctacg gcgtccgac agtctttggc gccacctatg acctatcgga ttctgcaaag 360
ctatgtatga ttctatggta taatgtgtgg ttgcccgaac cgcgcggaaa taatgtgctt 420
gcgtg 425

<210> 1750

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F1

<400> 1750

cccgaacctc catcgagtcg tgctacaaca acatccgcgt caactccggc gctccaatg 60
tgcccggtcaa cgacgtcgtc ttcaagaaca tcgacggcac ctccaacacg ccggaggcca 120
tcacgtcaa ctgcgccaac aacctgccct gccagggcgt gcagctcatc aacgtcgaca 180
tcaagtacaa caggtccgac aacaagacca tgtccgtctg caagaacgcc atcggcaagt 240
ccattggcat ggcgaaggag ctgcctcgtc tctgaacctc cttgcatcca tcaactcactc 300
ttcgtcaact ctctctttct cactctcgcc agtctttttt taggcctctg gcaatctgctg 360
aactttccta ctcaattccac 380

<210> 1751

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-005-Q1-E1-F10

<400> 1751

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cttgcaagaa caagtcaaca acggaaaagg ccttcaccgg aacaatcgcc tccggggata 120

cgcccaaac cagcctgggg ataacggacg ccttgetcaa cttagggtc gcaaccgacg 180

ccaacatcaa caaggccaac ccggaggggg acaaggacaa gatcgcaaaa atccttgctg 240

catacggcaa gacggccgac gcggtcgctg cggecccgct tcccgagaag ctcacagtca 300

tggagaagac cttctcgggc gtcgccgccg ccgctcatca ggangccgca gcagctgctg 360

ctgctgctg 369

<210> 1752

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-F12

<400> 1752

tttcttcctt ccgtcataat accgtgcag cttctgtgct tgccttgctt cttcacgttc 60

ttcatcctcg ccgacgggc ggccgacag gtcggcgcca tcggcatccc gctcattcgc 120

ggtggccata gcaggccagg agcgccggcc aagctcgcg caccgaagcc gatacctctc 180

aggcacgcgg cgccggcgcc accgaagctg acgcccattg cctcaggcgc ctacatcgctg 240

cggagcctgt gcctgaagac cgactactcc gacctgtgca tgcggggcat cgcgaagctg 300

ccgcagtcgc agctgccggt cgggaagcgg ctggacagcg c 341

<210> 1753

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-E10

<400> 1753

tctcctgctg gttactccgc gcgccttctc tttctctccc ggacgtcgat cgtgttcttc 60

agcacgggct agctagctcc ctccctccca gccatggcga cgccggacaa caaagggcac 120

gggcatccgc tgcccaagtt tggggagtgg gacgtgaaga atccggccac gtccgatggc 180

ttcaacgtca gattccacaa cgcacgctac cacaagagat ccaccagcgg ccttgagct 240
 cggatcgac actcatgcca ttcccggtc ttccgaact gcggaggtga cagtgggtac 300
 aggcccgatt tcggagacgg caaccattac acgccgccca aacggtagaa gtgggccttc 360
 tgctgctgct gaatcgaaac tcgctgtgct gctgtgctga c 401

<210> 1754
 <211> 301
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D10

<400> 1754

cctctcctag tgtcaatgct gctcgtcagg ctgcctcag tctcctataa cgacgaggac 60
 cgcggcggcg taactaaggc ccacgtcaac caccgcatgt ttaaggcggc accgtgggtcc 120
 aactggcacg cgacttacta cagtggggca cagcggttag ctgacacgac cgacaggggc 180
 gcatggtgat acaacggcga cctgtgcaaa tcatgaatgt agctgtatgg aggtttttca 240
 tacttcactt tacaccaacg gcaccggta cggtgcgtag tactatctca atggtcccag 300
 t 301

<210> 1755
 <211> 201
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D12

<400> 1755

ctctccccc gccggccaac aactcagccg ccgcaaccgc cacatcagcc atgggcgcct 60
 gcgcagccaa gcccaagacg cttgatgggc aagccccaat tgaggccgcc gtcgccacac 120
 ccaagggttac gcccgaggcc actccaatct ccgttgaggt ttccgctgat gaacaggtag 180
 cttataaggt ggtcgtggtg g 201

<210> 1756
 <211> 409
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D4

<400> 1756

cgtccactgc gatcctctcc agcacgaaga tggcggttcat cagcaatgtc gcattgaacg 60
cggccgacgt ggccgcgctg ctgctggctg caccgggtgtc gcctgccgcg cacgcgggtg 120
cgggtggcggg ggccgggaggg gcgccgtcag tgccagcggg tccgctggac atcgcgacg 180
tgggcgccaa aggcgacggc aagtcggaca gcaccccgat gatcctcaat gcgtggaaaa 240
acgcatgcga agcgacgggg gtagagaaca tcgtgatccc gtcgggcaag tacctgacgg 300
tcgggctgga gctgaagggc ccctgcaagt cctccatcat caatcagtct cgaacgcaac 360
ctgctcggca ccggggacct cagggcggtta cacatgaact ggatcgaga 409

<210> 1757

<211> 281

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-D9

<400> 1757

tgccccgcgt tgcgtatcat gtgcgtgggc gccctctgtg ctgtgctagt ctgcagtagc 60
tgcgccggg cctaggcacg tggcatcggt cgagatgata ccagtctgta cacgcgcaga 120
gtggttcatac gggaggatta cctggtagag gtcagaccac cggcttctcg ctctctcaca 180
ctagcgtatt ctcggggatg ataaggaggg agcgtaacgc catatccaca ccataaggca 240
tgacgtacag tgaccttctt taagggcatac acggtcgggt g 281

<210> 1758

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-B9

<400> 1758

gacgacgcgt ccaccacga gtccgagcaa ccagattacc agagccacca ctactcgctt 60
gctccgctcg cgcateccat ccagcggcg gcagacagag agcagggatc ggccgggtccg 120
ccgtcgacat ggctcggtag gtggagatgc tggacatggg cgtgcgcata gcggcgaggt 180

tccactcgca ctgcccgcag acggcgcgca tgtactacaa gccgccgcag acgcagacgc 240
 agtcgtcgtc gtgctcctcg gccgacgacg ccaatgccgc gagctccacc cccgacgcgc 300
 cgtcgggtccg gcggcccttc gcgctcgcgg cggcggcggc ggcggcggcg gatttcgcgc 360
 ccggcgaccg gtcggggccat catcagctgc acggcttgga caccgcgcaa g 411

<210> 1759
 <211> 292
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C10

<400> 1759

caggctcgtct cgtcgctgca gcaactcaca accgctccag gaccacgtac gatgcccacc 60
 ggctcgtcgcg caggtagcca caccatcacc gtcaggctgc agcgctcaac agccgggata 120
 tgaaagctca tcgcgcctg tccgccttgc atcgacccga gtgaactacg atattcatat 180
 tcgatcatct tttgtatctt cgacatgagt actatgtaaa tccgtgggtga agacctgagt 240
 aattagtggc acgccagagc ttgagtgttg attagatgta actgggtggc tc 292

<210> 1760
 <211> 171
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-C11

<400> 1760

ggctcgacgac gcgtcaaggc ctaagcgggt gtaggctgtg cccatgattc caggcgaaca 60
 tgtacttata tcgccgtggg taatcagggt agcgctgtc ccgtatcacc ctgactgctg 120
 tccgatttag gaggaacggc catgcataga gcagagccac atttcgaatg t 171

<210> 1761
 <211> 423
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-H10

<400> 1761

cgcggtccacc cacgcggtccg gaactctctg ctgatctaata agcattttcta caagaattct 60
 ttggtctggaa ggtttattag ttatttgcaa caatgaagga acatctaata cttaatatg 120
 atgacctaa cttcttgag cctaacgagg tcattgggac agtcaagaat aaatcatctg 180
 gggaaccat tgcacatcca cctccatgg ctcattgccat tttagcagtg ggagaaagca 240
 tggtttctga agcggaacct cttctgcaag tgggtggagt tcgcatttgt caggaggaag 300
 atagtatcaa aaatttagag agtccatgtg cttgcactgg cagtctaaag tatgctcata 360
 ggacttgtgt acaacgatgg tgcaatgaga aaggagatgt aacatgtgaa atatgtcatg 420
 agc 423

<210> 1762
 <211> 416
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-004-Q1-E1-H12
 <400> 1762

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 acgagcctct aaagcactcc tggggcgcca tctggaggaa ggacagcgac aagccgatca 120
 agggacccat caccgtccaa ctcaccaccg agggaggcac taagaccgtc tacgacgatg 180
 tcatccccgc cggctggaag cccaacactg cctacaccgc caaataaact aaccaaataa 240
 taataagtat caaatggcac acttgataga cttttatatt ttatttttta ttttaataaaa 300
 ggatataagg agtgtgacaa acaacaacac gaatattgta ttgtctatgt atctctcata 360
 tatgcaatcc caattttatc atggccacat tttaaaatgg aatatatgat atatat 416

<210> 1763
 <211> 434
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-004-Q1-E1-H2
 <400> 1763

cacgcatccg cccggccgcg cgtcaaggaa ccgccgcaca tttccatggg caaggtgctc 60
 tcctttctct gccgcgccg cagcggaag cgcggtggct cccggccagg cttgtcgtcc 120

tcgtctctct cgtccccgtg cccctccgcy aggagggcgt cgccgcgcgc cggggacgag 180
acggagcgcy tcttccgcaa gtccgacgcy aacggcgacg gccagatctc gcggtccgag 240
ctggcgggcy tggtcgagag cgtggggccac gcggccaccg acgacgaggt gtcgcgcatg 300
atggaggagg ccgacgcgga cggcgacgcy tacatcagcc tgcccagatt cgcgcgctc 360
atggactcgy cgtccggcga cgccgacgcc gtcgaggagg acctgcgcca cgccttctcg 420
gtcttcgacg ccga 434

<210> 1764
<211> 431
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-004-Q1-E1-H8

<400> 1764
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atgttatcag tatcacatac aaacaattat tacaggattc acatcaaagc aattcaggta 120
caaggctaac atcagtacaa caccaaaaga tagattgggc attgcatgaa tcacatgcgt 180
atgaagaagc cagaagagtg gatagctgtt tgtgatctct tctgtttctc ttctgttcac 240
ggtgtcacct gcttcagcgc tcttgactg ccggtagaaa gtcttacaga gatgagagct 300
aaaagggttt caaagtaaac aggttggttc agaaacgctt cacagaaagt ggcgcgcaga 360
gtagtgtatg tgcagctgac atgtatgtat agttaanagg gaactaactt tcgctcataa 420
atgtaaaata a 431

<210> 1765
<211> 393
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-A11

<400> 1765
gtcctgcgc cgcccgctcg atccggtcac tggccgggga gggctcagaa acctttcatc 60
caatacatat atctatctga gccctttccc gcggtgaggg ccgaccggag tccacacaca 120

cacggtgtcg atggcggccg taataaggag ccgccgccgc gtgtccggtt tcttctacgt 180
 cgtcctcgcc gcagctgcag ctgcagccgc ggcgcaagca tccaataacg tcacctccga 240
 cgaggagtac tgggcggagc gcgccgaggt ggctcggtcg cgcaacctcg ccgcctacgt 300
 cagcgacccc gtggccgccca cgaaccgctt caacgcggac gtgctgaggg ccacgacgcg 360
 gcgggcgctg gcgaagtacg atggcccgtg cat 393

<210> 1766
 <211> 140
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-005-Q1-E1-A4

<400> 1766

ccctcgtecc ggagccccga tctgctcccc gtctctcctt gggcagggtcc cccttttccg 60
 cgtgtgcgta ggccggctgg ttcccgataa gggggttgct ggcggtggag gccgcgggcg 120
 cggcgtcggg cccggcctcg 140

<210> 1767
 <211> 211
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-004-Q1-E1-G2

<400> 1767

gcatggtgag aaggaagagt caaagggcat cgatgcgaaa gcgtccgggc ctggtgggtc 60
 cttcgacatc accaagttgg gcgcctccgg caatggcaag acagacagca cgaaggctgt 120
 gcangangca tgggcatcgg cgtgcggcgg cactgggaag cagacaatcc tcatacccaa 180
 gggcgacttc cttgtcggac aactcaactt c 211

<210> 1768
 <211> 418
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-E2

<400> 1768

gacccgaccc gtccacccac gcatccggag agacgcatga ccgccggcga cgatcgacga 60
 tggaggaacc agatacccg cgccggcgat cgatggctcc ggcagctca tcggcggcga 120
 cgtgcctgtg cctcgctctc gcccgggcca cgctggcgct ggcccacggg gcgcaaggag 180
 gaggaccatc ggcatcggcg gcggacctgg acaatgtcac ggccgatacc ttcttgaca 240
 tcgagatcga cggcaagcct gcaggccgga tcgtgctggg actgtttggg gacaccgttc 300
 ctaaaacagc agagaacttc cgagcacttt gcacacggga gaaaggaatt gccaaagtccg 360
 gcaagcctct gtggtacaag gggtcgacgt tccacaggat catcccgggg ttcatgat 418

<210> 1769
 <211> 444
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-004-Q1-E1-E3
 <400> 1769

gaccaccccg tccacgacaa ggccgggtac ctgccgtgga atggcgactt cgggctcaag 60
 acgctgtggt acgccgagta cgccaaccgg gggcccggcg ccgacaccgc cggccgcgtc 120
 acatggcccg gctacaagaa ggtgatcagc aaggaggagg ccgaaaagtt caccgtgcag 180
 aacttcttgc acgccgagcc gtggctcaag cccaccggga cacctgtcaa gtacggcttc 240
 tgggcgtgag cacatattct tgtggagacc agaggatgtc gatgaagcag aggaagtcac 300
 ctatgcctag ttctgctatg catggtggta aatcactaat cgtccattgt tgggagcatg 360
 ttcacccacg gacggacgag ataaggtgct gagttgatat gaccataatc catgtacagt 420
 gtgtcacctg aacacttggt tgta 444

<210> 1770
 <211> 135
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-004-Q1-E1-E6
 <400> 1770

acgcgtccat cgtgttcttg ctctccgct tcgtctgctt cgctgtcgcg gcggtcttgt 60

tcgcttccgt cgcgttggtg gtgtcggctg ctgggctcgt ctctgtcttc cttgcgtctg 120
cttcttcctc cttcc 135

<210> 1771
<211> 238
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F12

<400> 1771

ccacgcgttc cgccaatcca tcttgggagg gcgccgctcg tcgagggcta gccaatgctt 60
gccatggcgg acgtccggtc tgcctgggtc cagcaccatc accgtcgttc cgatgcgtcg 120
tctccggcat cctccgggtt tgtgccggct gcgagggtcg ctgacgccct gcgccaacgc 180
ccgcggggtc tcgtgcaggt gtcgtagcgg gaccagggtc cgttgtcgac tgagcacc 238

<210> 1772
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F3

<400> 1772

acttacattc tgcaggatct aagcaaagac ttgatttagt tatggacgga ttggtaggcc 60
tcttgaaagt tcccttggtc cggggatatca accttgcta ccgcgacgca agaggcaccg 120
atccgtatgt cgtcctacgg cttggcaaga agaaactgaa gacaagcgtg aagaagagat 180
ccgtgaaccc catatggcaa gaggagctaa ctctgaccgt cacagatccc agccaaccac 240
tgaagctgga ggtgttcgac aaggacacct tcagcagaga cgaccccatg ggagacgcgg 300
agggtggacgt ggcgccactg atggaggcgg tgagcatgaa cccgcgggag gagagtctga 360
ggaacggcgc catcatcagg tccgagcggc cgagcgccag gaactgcctc gccga 415

<210> 1773
<211> 321
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F4

<400> 1773

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ctcagcgcgg ccgaggcacc ggcagagtca ccgaacgcag gcagtcctgc caaggcaccg 180

gccgagtcac cgaaggcatg cagtcctgca gtccttgcca aggcacccga gtctgctgcc 240

acgaaaactt gccccgtta gggaactcca gccgccttca accccgccgt tggcggttgc 300

ccatccttct cctcctccaa g 321

<210> 1774

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-F5

<400> 1774

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gccgtccggt ccgacagggt ccaccaccac caccgccgt cccgatgcgtc gtgcccggca 120

acctccgcgg ccgtggcggc ggcgagggcc gatgacgcc tgcgccagcg cccgcggggg 180

ctcgtgcagg tccgggagcg ggatcagggc ccgctgtcga cggggcacca gcacctgcac 240

caccatcacc accagctgct gcggtcggcg gcgttccac cccgcgcgcc ggggccgggg 300

cgccgctctc ctcagcgtg ccaatgccac ctcaacatca gggagcagcg ctctgcagc 360

gaggtggccg gctgcaccgc g 381

<210> 1775

<211> 385

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-004-Q1-E1-E1

<400> 1775

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taagggttagg gaaggcaggg aacacggtgg cgccttcaac ccgcaggctc ccggcatctg 120

ctctgcacc ccgttcccgg aggtgtgcac gtccaccgcc gggcggcacg cgtccaagta 180

cccgggtcatc gacaacctgg ccgtgctgaa catgcangtg gacgcgttcg ccaagcgcac 240
 cgcgagggcg cgcaagcacg tcgcgaggtc ggcccgcacc atcccgcgcg agcagacgca 300
 ggcgctcacg ttctgcgaca ccatgtacat gaacacgcag gacaccatcg gcgcggcgca 360
 acgggccatc acgttcaagg acacc 385

<210> 1776
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-D1

<400> 1776

ccaaccctcc gagaaatcaa ccggcaaggg ctccaatccg gcgaacaact tccgcgtcaa 60
 cctaaccgtc ctctccgtt ccgcccgttg gaacggcggt caaaaccaac ttccccacta 120
 agttcatcaa gggccgcgtc aattgcaaaa cttgcggcgc cgggttcgta acaaagtca 180
 ccgagtaa at cgcgggcgca aaggtgaggc tgagatgcaa gcacttcggc accggcagct 240
 cgagcgctcc atcaacgggg tgaccgacgg gaacggcacg tacacgatcg agctcaagga 300
 cagccacgat gaggacatct gcgaggtggt cttggtggag agccgcgcaa agactgcgat 360
 caggtgcagg cggacaggga ccgcgccggc gtctctgct 398

<210> 1777
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-D4

<400> 1777

taaagtcccg cctttttccg acattcacag gggggacagg aaatcagcgg ccatggcctc 60
 gattccggcg acgaccttcg ccgtcatctt atccgtcctc ttctgtgcg cggttggcac 120
 cgccgtcgac aacgacctcc ccgactacgt catccagggc cgcgtctatt gcgacacctg 180
 ccgcgccggg ttcgtgacca atgtcaccga gtacatcgcg ggcgccaagg tgaggctgga 240
 gtgcaagcac ttcggcaccg gcaagctcga gcgtccatc gacgggggtga ccgacgggaa 300
 cggcacgtac acgatccagc tcaaggacag ccacgaggag gacatctgcg aggtggtctt 360

ggtggagagc ccgccaagg actgcgacca ggtgcaggcg gacagggacc gcgccggcgt 420
cctgctcacc aggaacgt 438

<210> 1778
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-D5

<400> 1778

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gccagctcgc gaaaataatg aagagccgca gcatggcatc atcggccgcg ctcttggtgc 120
tagccctcgc gctagtggcg gccaccgccc cacaggtagc ggaggcaaag aagaagagag 180
cggcggagag cggcgaggcg gcggaggcga agaagatcca ggacgacttc tgctcgacgc 240
tgtgcgaggg caagaagggg acggacctgg tcgtgtgcaa ggagtcctgc gcgctctccc 300
agcagtccaa cctggtgctg tacggcagga tccagtgcaa gggcaagtgc accgagcaga 360
agggcatcac ggcccgccc atgaaggtct gccaggagga gtgcgacaag gcgtacgtgg 420
tg 422

<210> 1779
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A8

<400> 1779

acccaagcgt ccagacttgg tctcatggaa gatttgcaac ccaggagata accctctgct 60
tgtgaagaca aggctcaggc actgggctca agtagtggct tggtcagtga agcactcgag 120
ctgatcctcg tcagtgtttt attcacgctc ttcgtcgata cataataccc gtacaagtgg 180
ttgcgatggc gatgaattag tcgtgtccga gtgaaactag atcaattgac cttgttgctc 240
gatctaattg cgtcccaggc cacattgttg tggacagatt taattagcgt cgggttggca 300
aattaaaaca tgtatatgca aagtactgtt aaaggttggc atggtgtaaa cagtgtgagc 360
tatctcccta aatcattatg tcacatattt gagacagtct ttccgtatct gcgaaaacaa 420

acttgctctcg tttta

434

<210> 1780
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A9

<400> 1780

cccaacatca ccaccaacta caacggcaag tggctcaccg ccagggccac ctggtacggg 60
cagcccaacg gtgcggggcg tcctgacaac ggcgggtgcgt gcgggatcaa gaacgtgaac 120
ctgccaccct acagcggcat gacggcgtgc ggcaacgtcc ccatcttcaa ggacggcaag 180
ggctgcgggt catgctacga ggtgagatgc aaggaaaaac ctgagtgtctc gggcaatcca 240
gtcacgggtgt acatcactga catgaactac gagcctatcg ctccctacca ctctgacttg 300
agcggcaagg ccttcggctc cctggcaaag cccggggtca acgacaagat tcgccactgc 360
ggcatcatgg acgtcgagtt cagaagggtg cgatgcaagt accccg 406

<210> 1781
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-B1

<400> 1781

ccgacccttc gatccaccaa attattaagg aaaggcccgg ccctttcctt cggacatcaa 60
cagggggaag gggaaaccac ttccattcac ccggcggcaa taatggcctc ggttccgggt 120
ccggcaacaa caaccgccgc cgtaatccta tgcctatgcy tcgtcttctc ctgtgccgcg 180
gctgacgacc ccaacctccc cgactacttc atcaagggcc gcgtgtactg cgacacctgc 240
cgcgccgggt tcgtgaccaa cgtcaccgag tacatcgcgg gcgccaaggt gaggtggag 300
tgcaggcact tcggcaccgg caagctcgag cgcgccatcg acgggggtcac cgacgcgacc 360
ggcaactaca cgatcgagct caaggacagc cagaggagg acatctgcca agtgggtgctg 420
gt 422

<210> 1782
 <211> 385
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-B10

<400> 1782

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gggccgacca acgcgtccac ccacgcgtcc gctgataatg tcggtgacaa tgttggtgac   60
attgctggaa tgggatctga tctctttggg tcatacgcag agtcttcttg tgctgccctt  120
gttggtgcgt ctatttcac tttcggaatc gaccatgatt tcaactgggat gtgctacca  180
ctccttggtta gctctgttgg tatcattgtc tgcttgatca ccaccctttt tgctactgat  240
ttctttgaag tcaaggctgt gaaagaaatt gagcctgcac ttaagaagca gctcatcatc  300
tccaccgtcc tgatgacttt tggattgtct ctaatcagct ggttggccct tccagctaag  360
ttcaccatct acaacttcgg tactc                                         385

```

<210> 1783
 <211> 319
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-004-Q1-E1-B3

<400> 1783

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aggccccagc tgaggccgcc gtctcaacac ccaagggttc gcccgaggcc actccaatct  120
ccgttgaggt tgcggtgat gaacaggtag ctgagaaggt ggtggtggag gagccggctg  180
cggcggccga cgttgagcat cagaaggcta atgagggtgct cgctccagag gcggccgctc  240
ccgagcccga ccacaaggag gaggaagccg tggagaagac cgctcgtcgan gaggagaagc  300
cagcggcagc agcccatgc                                         319

```

<210> 1784
 <211> 460
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-B6

<400> 1784

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gctcgccggc agcgggaacg aggtggcggg gaagcagctc aagtccggca gcgggcaggg 120
ggagcgcgag ttccaggcgg aggtggagat catcagccgc gtgcaccacc gccacctggg 180
gtcgctcgtg ggctactgca tcgcgggcaa ccagcgcgatg ctcgctctacg agttcgtggc 240
caacaacacg ctggagcacc atttgtacgc caaggacggc cctgtcatgg actggagcac 300
ccgcatgaag atcgcgctcg gctccgcaa gggcctcgcc tacctccacg aggactgcca 360
tcctcggatc atccaccgcg acatcaaggc cgccaacatc ctgctggaca acaacttcga 420
ggccatgggtg gcggacttcg ggctgggtcaa gctcacgacg 460

<210> 1785

<211> 340

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-C1

<400> 1785

gtaacccaaa aggtattcaa aaaaacttgc ggtttgaaaa ccatgaccat acaacagctg 60
aatgggtcac cttccaacgg tgacaagttg agcggcgtag cgaatcttaa ggctgggatt 120
tctctgctca atataagact gagggcactt gaagatgacc aggagtttct caagcaggtg 180
ttgagttccc tccaatgcgg tagtgatgga ctgcagtgtg tacaggagat aagcggccat 240
ctagcagagt tgcgaagagt tgtgactcgc taaggaaaat ggttttgccc cgagtccaaa 300
ttgttaggtc atcatgacgt cttcccatgc agcagactaa 340

<210> 1786

<211> 369

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-004-Q1-E1-C2

<400> 1786

gggaaaactc tcttcctcnt cctcctcctc tcgaattcgg tccctggccc ctgtcgcctc 60
cccgcggttc cgccgttttt taagggggaa aggaggcggc ggagaagaat gatgagggag 120

gaaaggttgg ttccgtgtga ggcagccctc gccggcggaa tcaccgccgc ctctcgtcgt 180
ggactcgtcg gtgtcgacca ttccatgccg ggctccgact acaactacct caagttgcc 240
cgtaatctct acgaagtcga aatcctcact gggcagcttc agaactaaac tagtgactac 300
accctacacg tggtgggtat gttattgcgc tgtgtacatc ttcatgcaga ccttcatgat 360
tccaaggac 369

<210> 1787
<211> 184
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-C3

<400> 1787

ggaaggtcgc gtcccaatcg cgcctctgct cctgctcccc ctctctctcc tctcgtctc 60
cactgcgtcc gctgcacgga ccgtgggcga caccgtgcag gacgcgtgca gcaagacaca 120
attccccaag atctgcgtgg acagcctcac cgcaaagcca gagaaccaga agggcgaccc 180
gcgc 184

<210> 1788
<211> 332
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H12

<400> 1788

cgcgtctagc gatggcgaca ttgtggcggg ggacatcaag gagaatggct ccgatacgta 60
cgagcctcca gtgcactcct gcggctccat ctctcgtcgtc gcagacagag agatagtgag 120
agagagggag ggagagaggg aaccgggaga ccgccaccaa gcgtgaggca gaggaggagc 180
atggcgggcg cgccgtcgag gtcccggggc gactacgacc acctgattaa gctcctgctc 240
atcggcgaca gcggagttgg aaagaattgc ttgctgctgc gcttctctga tgacacattc 300
acaacaagct tcatcaccac cattggcatt ga 332

<210> 1789
<211> 325

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H6

<400> 1789

acagagcgct tcatggtgaa aaaacaggac gggctggtga agctgcaggg gtccaagcaa 60
 gggaggaagg ggcagctcgc gatcgacgcc gagatcttcg aggtgacacc ggcctttcac 120
 gtcgtcgagg tgaagaagtc ggcaggcgac acgctggagt atgagatgtt ctgcagcaag 180
 ggcctaagac cttcactcag cgacatctgc tggagcagcc gatctgagga gaacatggct 240
 ctttcagtgg ttcagccatc ataaattgaa accatccctc ttagaccgtc tccagcactt 300
 tatccatatg gtccccccct cttag 325

<210> 1790
 <211> 355
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H7

<400> 1790

ttgcactaga ttaacgcata ccatgttgcg gcatacaacg tgaacccac agtgaggcgt 60
 catcaaata gaatagacag gtccctgcac caaatctggc tcttctctt tgtgtttgtg 120
 ctgctgtgcc tgctcgtgtt ctgagacagc tgattgttct atacgcctct ttgtcgatat 180
 tgaacatggg gacagaggga tactaatggc tgacacgtat agtatacagg gtaatggctc 240
 gtatcgacaa gcatgtgtct aaagcatgct gatatacagt tgtaatatga tgaaacatgg 300
 gatgtcaaca tgtatatttc attcttctcg tcataacgtc atcggtttcc tgatc 355

<210> 1791
 <211> 335
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-003-Q1-E1-H8

<400> 1791

cgcgtccgca agaacgagcc gcgcacgtcg ggcgcgctcc acgactgcc ggagatgctg 60

gggtacgcca tcgacgagct caagtcgtcc ttcgacaagc taggcggcctt cgagatgacc 120
aacttcaaca aggccgtgga cgacctcaag acgtgggtca gcgccgcgct cacgtaccag 180
gacacctgcc tggacggcctt cgcgaacgcc accaccaccg aggcctccgc caagatgcag 240
aaggcgctca acgcgtcgca agagctgacg gaggacatcc tgnccggtgtt ggaccagttc 300
tccgacacgc tgggagggct caacattcgg ccgcg 335

<210> 1792
<211> 422
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-004-Q1-E1-A1

<400> 1792

cgggcccaacc aanccttcga ggccttgca agggcgactt gacaatcaag ttggatggca 60
accggctggc gaccacggac ctaagccagt acaaggaaca tggtaattgg atcgagattc 120
tacgcgtgga taacctggtc atcaccggca agggaaacct tgacgggcag ggcccagccg 180
tgtggagcaa gaactcctgc accaagaagt atgactgcaa gatccttccc aactcgctgg 240
tgatggactt cgtgaacaac ggggaggtgt ccgggggtcac gctgctcaac tccaagttct 300
tccacatgaa catgtaccag tgcaagaaca tgctgatcaa agacgtgacc gtgacggcgc 360
ccgggggacag cccaacacg gatggcatcc acatgggcga ctcatccggg gattcacatc 420
ac 422

<210> 1793
<211> 283
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A3

<400> 1793

cgtccacaaa gaaacaggca catatgaacg ttacatcaag ttggccttca atccgggaac 60
aggttgcaat ggctgtggtg ttggggttct tggtgaccgg cgcattggtg ggtcctccca 120
aagtcccccc aggcaagaac atcacggcca cctatggcaa ggactggctg gacgctaaag 180
cgacatggta tggcaagccg acgggtgccg gtcccgacga caacggtggt ggctgcgggt 240

acaaggacgt gaacaagccc cccttcaata gcatgggcgc atg 283

<210> 1794
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-004-Q1-E1-A5

<400> 1794

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ctccagggtcc tccatcctac ttgcaacggc gatgctgggt gcgctgtttg cggttgggtt 120
gtgcaccacc ccgctcacct tccagggttg caagggatcc aagcctggcc acctgatcct 180
cacccccaat gttgcaacca tatctgacgt ggagatcaaa gagcacggg gcgatgactt 240
ctccttttacg ctcaaggagg gcccgaccgg cacctggacg ctcgacacca aggccccgct 300
caagtacccc ctttgcaccc gctttgctgt caagtccggt ggctaccgca tcgccgacga 360
cgtcateccc gccgatttca aggccggcac cacctacaag accacactca gcatctaate 420
agcctctgat ga 432

<210> 1795
<211> 409
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-H10

<400> 1795

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ccaacatctg ggagcggtag tacctcgggg agcagttcta catcagcgtc gtctcgccgg 120
cgcgatcact gcgcgacgag tacaacatgc ccgacaacgc cctccgctgc ggcaaggtag 180
tggggctgcc gctgccgccg tcctacgccc ccgcgcgcta agacgacgaa ggccctcgttt 240
tctcctcgtg gtctgaccat ccaatccaaa ctcaaaagaa caaatacgaa agaagcgtag 300
tgaaggggaa caaatgaatg gatatatgta atcttgagat gcatgccctc tcaaatcact 360
gtactggggg tctcaaaaaa atcattgtaa tgggagttat atatataac 409

<210> 1796
 <211> 339
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-003-Q1-E1-G1

 <400> 1796

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 tgcgggcaca ggttgcgatg gttgtggcgt tgggtgttctt ggtgagcggc gcatgggtgcg 120
 gtcctcccaa agtcccccca ggcaagaaca tcacgggcac ctatggcaag gactgggtgg 180
 acgctaaagc gacatgggat ggcaagccga cgggtgccgg tcccgacgat aacggtggcg 240
 gctgcgggta caaggacgtg aacaagcccc ccttcaatag catgggcgca tgcggcaaca 300
 tccccatctt caaggatggg ctgggttggt ggctcgtgt 339

<210> 1797
 <211> 336
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-003-Q1-E1-G12

 <400> 1797

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 aggagctccg cgccggcgcc gccacgttcc tcaccatggc ctacatcatc tccgtgaacg 180
 ccgcaatcct gaccgactcc ggcggtccgt gcacggcgcg ggactgcacc cccgtggcca 240
 ccgccaccaa ctgcagacc gcggactgcg cagtcgtcgg ggctaaggct aacccggggg 300
 tacagcagtg cctggcgcg cacaagagcg acctga 336

<210> 1798
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-003-Q1-E1-G4

 <400> 1798

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gcacgagcgc tgcccgcctcg ctgaaccatg gcgggctccg cgggtggcctg cgtcctcctg 120
tcggccgctcg cgtctgctctg cctgtaccac ctccctttcc tctccctgtc cgtcccggac 180
ccggcagcag cagcagcagc cgtccccgc gcgcgcggtg gccaccgtgg cagcaacgtt 240
ccgtccgggt caggaaccgc caacgtcgtc ctccgcttcg gcctgtccgg gcagccgctc 300
cgctccaacg accccgccgc cgccgccggc ctcccggaaca tcgacacctt ccgcggcaag 360
ctccagcggc tgcttctctc cgacgaccac gaccccggtt ggctgcgcgg ct 412

<210> 1799
<211> 400
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-003-Q1-E1-G9
<400> 1799

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ctcaaagggtg gcatgcagat ctctgtgaag acacttactg gcaagacgat aacccttgag 120
gtggagtcct cagacaccat tgacaacgtc aaggccaaga tccaggacaa ggagggcatt 180
caaccggacc agcagcgggt gatcttcgcc ggcaagcagc tggaggatgg tcgcaccttg 240
gctgactaca acatccagaa ggagagcacc ctccacctgg tgctccgcct caggggtgggt 300
atgcagattt ttgtgaagac attgactggc aagaccatca ccttgagggt ggagtcgtct 360
gacacaatcg ataattgtcaa agccaagatc caggacaagg 400

<210> 1800
<211> 371
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-003-Q1-E1-D8
<400> 1800

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ggtcaatttt cgggccatca tcacacgcct actataattt tagaagcagt tgcttcacaa 120
gatttatgga tttggcatgc tttttttgga ttacctggct ctctcaatga catcaatgtt 180
cttcatcgat ctcccctggt cgcaaaatta tcaaatggag aaagtccaca agtgaattat 240

agaataaata accatgacta ttcaatggga tattaccttg cagatggcat atacccttct 300
 tgggcaacat tgggtaagac cataccagaa ccacggggca ataaaagaat ctactatgtg 360
 aaggcacaag a 371

<210> 1801
 <211> 401
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-003-Q1-E1-E12
 <400> 1801

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 aagcccttct tcttcttcgc cctggggtcg gcgctccttg gtgcggcgcc ggccgccgca 120
 aacgcgcccg gcggggcggt cagcaactgg gtggcgatga accagcagag ctacgcgctg 180
 tacgcgcaaa aattccgtcg gggacggggg caaggagccc ctggacaaga agctgtcgga 240
 ggcggtgaag aagaaggta cgtacgtggt ggaccccagc ggcaaggcg actacacgaa 300
 catcaccgcy gcgctggagg atatcncggt gagcaaacac aagcgcgta ttctggatct 360
 caagcccggc gctcagttac gcgagaagct gttcctgaac a 401

<210> 1802
 <211> 370
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-003-Q1-E1-E2
 <400> 1802

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 ttgccatggc agccgtccgg tccgacaggg tccaccacca ccaccgccgc tccgaggcgt 120
 cgtgcccggc aacctccgcy gccgtggcgg cggcgagggc cgatgacgcc ctgcgccagc 180
 gcccgcgggg gctcgtgcag gtccgggagc gggatcaggg cccgctgtcg acggggcacc 240
 agcacctgca ccaccatcac caccagctgc ggcggtcggc ggcgttccca ccccgccgcc 300
 cggggccggg gcgccgcct cctcagcgt gcgaaagcga cctcaacatc atggagcacc 360

gctcctgcag

370

<210> 1803
<211> 423
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-003-Q1-E1-E3

<400> 1803

ttggcctcac gatatgccga gtcattattac anataattcc aattcatata tgaacatttt 60
tgcctcctta tttcttgaaa atgtggaatt ggaattcctt tcctttggct tcaggatagg 120
cctaataaga aaacaaataa ttccaattca tatatgaaca tttttgcctc cttatttctt 180
gaaaatgtgg aattggaatt ccccgaggaa ttccgatctc atttcctttg gcttcaggat 240
aggcctaata agaaaacaaa taattccaat tcatatatga acatttttgc ctccttattt 300
cttgaaaatg tggaattgga attccccgag gaattccgat ctcatttcct ttggcttcaa 360
gatangccta ataagaaaac aaataattcc aattcatata tgaacatttt tgcctcctta 420
ttt 423

<210> 1804
<211> 303
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-E5

<400> 1804

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atctacctcg ccgcgcgggt cgtcgcgttc tgcgacgcgt acgccttcgg cgtgacggac 120
atgaacctgt cgagcaccta cggcaagctc gccatggtgc tcgtgggctc cagcgtgggg 180
cgcaacgacg gcggcgctgt cgcgggcctc gtggcctgtg ggatcgtgat ggggaccatg 240
tccaacgcca acaaactgat gcacgaactc aagaacgggt acctgacgct gaactcgccg 300
cac 303

<210> 1805
<211> 99

<212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-003-Q1-E1-E8

<400> 1805

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 cacanacaag cagagcaata ttcttgaaga tctggacac 99

<210> 1806
 <211> 287
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-F12

<400> 1806

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 ggcggccgca caaccgggta cccaaggccc cccgcgcgcg ccttcaacct cgtctgctgt 120
 cgctcctccg tgatggccga cgtcgacgtg gacgccaaca acgaggccga gcaaaggacg 180
 cgctcggagc cggggacctc catgtcgccc tcatcgagg cgcagcagca cacggccagc 240
 agtacacca acgagtcacc ggcgcgcgcc ttcgcggggc aaacgct 287

<210> 1807
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C10

<400> 1807

gaccgcccc tccaaccacg cgatcggaat tctcgccctc gttgcggtcg tccacatcct 60
 tttctctcct cctcgccggc ccaacctgat tggtcttcaa ccaagaggaa gaaaggaagg 120
 aagggaccgg aagcatcagc catgtcgaac tcggcgctcg gaatggccgt ctgtgatgaa 180
 tgcaagctca agttccagga gctcaaggca aagaggagct tccgcttcat cgtgttcaag 240
 atcaacgaga acgtgcagca ggtgggtggtg gacaggctgg gggggccagg agagagctac 300
 gacgccttca cggcctgctt ccccgccaac gaggccgct acgcccgtgt cgattttgac 360

ttcgtcactg acgagaactg ccagaagagc aagatcttct ttatctcttg ggccccggat 420
 acat 424

<210> 1808
 <211> 242
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-003-Q1-E1-C11
 <400> 1808

gccaaatcct cccgaataac ttggtgccgg gttttgtgac gaacgtccag attcgcgggg 60
 tcaagctgct caacagcaag ttctccacc tcaacatcct ccagtgcag aacgtgctga 120
 tcgacaaagt gacggtcaag ggccccgggg acagcccaa cacgggcggg atccacatcg 180
 gcgactccag caacgtgacc atcaacagca ccaacaaccg ggtccgggac aaatggatcc 240
 cc 242

<210> 1809
 <211> 376
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-003-Q1-E1-C12
 <400> 1809

acgcgatcgc gacagaatgg cttgcacaga caatgcaatg aaagccttgt tcctcctggg 60
 cctcttctgc atcgtgcatg gtgagaagga agagtcaaag ggcatcgatg cgaaagcgtc 120
 cgggcctggg gggtccttcg acatcaccaa gttgggcgcc tccggcaatg gcaagacaga 180
 cagcacgaag gctgtgcagg aggcattggg atcggcgtgc ggcggcactg ggaagcagac 240
 aatcctcata cccaaggcgc acttccttgt cggacaactc aacttcacag gcccttgcaa 300
 gggcgacgtg accatccaag tggatggcaa tctgctggcg aacacggacc taagccagta 360
 caaggaacat ggtaat 376

<210> 1810
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C2

<400> 1810

ggtcgatgcc cgctctaca atgagtcatt tgaacgcgga cttcatcgcc cagcaggcca 60
tctcgtcgag cgtggccgag ttcagctggg acctcaagtt cccgggcgcg caggtgctgc 120
tggccgagtt caacatgacc tcggcgggcg gcgcgcagaa cttcaagtcg caggcggaca 180
acttcgtgtg cgcggtgctg ccggacacgg cgttccacca ggtgttcatt accccgggcg 240
gcgtgatcca cctccgcgac ggcgccaaact cgcagtcagt gaccagcagc gcgttcctgc 300
tgggtggtgta cgcggacctg ctgctgcgga cggggcagac ggtgctgtgc gggaaccagc 360
cgctgcccc ggcccgggtt cagcagttcg cgcggcaaca gatggactac ctgct 415

<210> 1811

<211> 366

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-003-Q1-E1-C3

<400> 1811

acctcgacaa cctcgtcgac gagtacgacc gcattcgtgc gacctcctcc ggcggaggat 60
cctcgcgcac ctncgggatt cgctcttcc tcttccccgc caagcccagag tctcgtcat 120
cgctcggctc cctgctcgac gactcttcaa agtccgagaa ctggttcgtc gacgccetca 180
acagcgccat ctccggctcg ctgcacggca taccgagggg gatctccacc gattcagcct 240
ccgtcaactg cttctcggc ctgcaggacg actcctccgt gcactcccgat agtggagtaa 300
ccaactcggc tcccacggag gaccagcgcg ccagccagcc gaagctcccc ggcgggcgcg 360
ccgctg 366

<210> 1812

<211> 339

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C5

<400> 1812

ctcgcggggc gacacaagcg tcaagtacgt ctgccaccag aaggtctgcc ccggcaagcg 60

aagcaactcc tgcgatgtct ccatcaagaa cgtcaccttc cgcaacatct cccggcacgtc 120
gtccacgccc gaagccgtca gcctgctctg ctccgagacg cagccgtgca gcggcgtctc 180
gctcatcgat gtcaacgtcg agtacgccgg caagaacaac aagaccatgg ctgtgtgcag 240
caacgccaag ggaaccgcca agggaagcct ccaggccctg gattgcctcg tctgatcaat 300
gaccttgcac ttgcatgcat tcttcttccg tttcacttt 339

<210> 1813
<211> 411
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-003-Q1-E1-C6

<400> 1813
ctcgcggggtc gacacaagcc tctagatcga ct cattatag agatctatcg atcgagcttt 60
cgttatcctc ctcttacatt acaggtcata gctaagcagg tctgacagga tgtcgtggca 120
gacatacgtc gatgagcacc tcatgtgcga gatcgagggc caccacctga cctccgctgc 180
catagtcggc cagcagggcg ccgtttgggc ccagagcacc gcattccac agttcaagac 240
agaggagatg accaacaatca tgaaggactt cgacgagccc gggttcctgg ccccgaccgg 300
cctcttctc ggccccacca agtacatggt catccaaggc gagcccggcg ctgtcatccg 360
cggaagaag ggatctggan gcataactgt gaagaagaca gggcaagcga t 411

<210> 1814
<211> 351
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C9

<400> 1814
tacatcgcta gctcgccacc aacaatggcc tcaagggtact ctatcctgct tgccacaacg 60
aactggcta tggtgttcgc attcgggttcg tgcaccaccc cactcacctt ccaggtcggc 120
aagggtcca agcctggcca cctgggtctc acccctaaca ttgccaccat ctctgacgtg 180
gagatcaagg agcatggcgg cgacgatttc tcctttacac tcaaggaggg ccagctggc 240

acttggacgc tcgacaccaa ggccccgctc aagtaccccc tctgcatccg ctttgctacc 300
aagtctggcg gctaccgtat cgccgatgat gtcacccccg ccgatttcaa g 351

<210> 1815
<211> 361
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-D1

<400> 1815

cagacgttga ggtcgagggg cacggtatct ctgagcttca tcggagagcg acccgccacc 60
gccacgcttg gccgcaagcc gagaagagtg ccgggcccgg agaccggacg attattgac 120
cgtagcagat tcgctaattg cggtacggc ggacatggag cggatcttca agcgggttca 180
caccaacggc gacggtaaga tctcgtctgc ggacctgacg gaggcgctac ggacgctggg 240
gtcaacctct gccgacgagg tgcaacgcat gatggccgag atcgacaccg acggcaacgg 300
ctgcatcgac ttcaacgagt tcatcacctt ctgcaacgca accccggggc tcataaggga 360
c 361

<210> 1816
<211> 390
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-D10

<400> 1816

ctgtgaaatg ttgagaacca tgtggtcgtc aatgcgggca caggttgcca tgggtgtggc 60
gttgggtgtc ttggtgagag gcgcatggtg cggctctccc aaagtcccc caggcaagaa 120
catcacggcc acctatggca aggactggct ggacgctaaa gcgacatggt atggcaagcc 180
gacgggtgcc ggtcccgcg ataacggtgg cggctgcggg tacaaggacg tgaacaagcc 240
ccccttcaat agcatgggcg catgcggcaa catccccatc ttcaaggatg gtctggggtg 300
tgggtcctgc ttcgagatca agtgcgataa gcctgtggag tgctccggca agcccggtg 360
ggtgcacatc acggacatga actatgagcc 390

<210> 1817

<211> 391
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-003-Q1-E1-D12

<400> 1817

acattggtgt taatgttaaa aacaagttgg cctccattcc gggaaaaggt tccaatggtt 60
gtggcctttgg ggtccttggg aaaaggccca tgggtgcggtc ttcccaaatt cccccaaggc 120
aagaacatca cggcaaccta tggcaaggac tggctggacg ctaaagcgac atggtatggc 180
aagccgacgg gtgccgggtcc cgacgataac ggtggcgggt gcgggtacaa ggacgtgaac 240
aagccccct tcaatagcat gggcgcatgc cgcaacatcn ccatcttcaa agatggtctg 300
ggttgtgggt cctgcttcga gatcaagtgc gataagcctg tggagtgtc cgcgaaaccc 360
gtggtggtgc acatcacgga catgaaacta t 391

<210> 1818
<211> 377
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-003-Q1-E1-A12

<400> 1818

gtgccgcctt cgggtggcgga caccttgacc cattaccggc tgacggcaac ggcgggcacc 60
ttctgctaca tcgaccgga gtaccagcag acggggaagc tgggcgtcaa gtcggacatc 120
tactcgctcg gcgtgctcct gctgcaggtg gtcaccgcgc ggccacccat ggggctcagc 180
caccacgtcg agaaggccat cgacgcgggc accttcgcgc agatgctcga catcacgctc 240
aaggactggc ccgtcgagga ggcgctcggc tacgcanagc tcgcgctcaa gtgcacggag 300
atgcggccga gggaccggcc ggacctcgca accgtcgtac tgccggagct caaccggtta 360
aggaacttcg ccacgcg 377

<210> 1819
<211> 336
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A3

<400> 1819

cgcgacatgg tgategagct ctgccaggag ctcatcgtga gcagcgacaa gaccatcgac 60
gggcgcggag cgcaggtgca catcgtgggc gcgcagatca cgctgcagaa cgtgcgcaac 120
gtgatcctcc acaacctgca cgtccacgac gccgcggcgc acggcggcgg cgcgatccgg 180
gactcgcagc accactgggg cgtgcgcggg gagagcgcgc gcgacggcgt ctccgtgatg 240
gggtccagcg atatctggat cgaccacctg tccatgagca gctgcgcgga cgggctgggtg 300
gacgcggtgg acggctccca cgccatcacc gtctcc 336

<210> 1820

<211> 331

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A4

<400> 1820

tctagagtga atcgtattca tcgcgctgtc gcgggggtag gggctggtga tcactatcgc 60
ttgccgctcg gtgatccatg gccggctccg cgggtggcgt cgtaccctcg tcagccgctcg 120
ccctgctctg cctgtagtac gtccttttgc gtcctctgtg cgtcgcggaa gcggcatcag 180
cgtcagcagc cgtcccccg cgcgccggtg gccaccgtgg cagcaacgtt ccgtctgggt 240
cacgaaccgt ccaactcgtc ctccgcttcg gcctgtccgg gcagccgctc cgcctctacg 300
actccgtccg ccgccgctgg cctccccgac a 331

<210> 1821

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A5

<400> 1821

ccgacccaag cgtccaccgc cgccgtaatc ctatgcctat gcgtcgtcct ctccgtgtgc 60
gcggctgacg accccaacct ccccgactac gtcattcagg gccgcgtgta ctgcgacacc 120
tgccgcgccg ggttcgtgac caacgtcacc gagtacatcg cgggcgcaa ggtgaggctg 180

gagtgcaggc acttcggcac cggcaagctc gagcgcgcca tcgacgggggt caccgacgcg 240
 accggcacct acacgatcga gctcaaggac agccacgagg aggacatctg ccagggtggtg 300
 ctggtggcca gcccgcgcaa ggactgcgac gaggtccagg cgctcagggg cgcgcgccgc 360
 gtctctgtca 370

<210> 1822
 <211> 349
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A6

<400> 1822

gcacgcctct acagggcatc ttgtcatggc gcaagggtggc gcccgcctct atggagccgg 60
 tggcggacgg gaccgccgcg ctgacgtcaa cgaccggctc gtgtagcgtc aagtatgact 120
 ggcaagggttc gtggccagcc gtcaacaagt tcatggccga cgccgacgtc acgttggcct 180
 ataagcccggt caggaccaga gcgatcgcgc gctcaatcag cagcatgata gacatcacgg 240
 ggacctacag catcgatctc accgaagttg ctcaacatga catacgggaa catgatgctt 300
 atgttcagtg gctcatcga cgccactacc gcttagcaca tcattgatc 349

<210> 1823
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A9

<400> 1823

ccaaccaagc ctccgagccc ctggctcctg gtccgttttg gttttggggc aatggttccc 60
 aacaacggca acaccaacgg ttacaacagt tcattcccgg aaggcggggc tcacctctcg 120
 ccaaaaaggc tctggattcc gggcgtggcg gagggatgtg ctgaggccgg acaggacggc 180
 cggcgaagct tgggcgccgc cggcgcccaa ggccaacagc aacgtcccag gagggccctt 240
 cggtcgtcgt tgactcatcc agatccagtc gcacccgccc aatcgccatc gtttcatgac 300
 acatcgacca gaagatagct agcaattccc atctcactgg tgtgtgttat tttagcttct 360
 tttaacgatg aagaactagt ggcatgatt gaaataatac aacttaatgc aacgaaaatt 420

aagaa

425

<210> 1824

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B1

<400> 1824

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tggtgtatat cagaatgata atttgcacaa gtcacagtgt ctacatactg ggctgattga 120

tactgatcca agtgtgaact tgcacggcaa tgggtggcctc tctgtgtctt cgtctcaaaa 180

tccagttgtg gactgtgttt ctaggagaga ggatccccctt cgtgattggg gcaatatcgc 240

ctgcagtga ggaataattg gatgtgacca taccaccacc gataatgaac acataaagct 300

agcacacagg ctgcacgata atgttcaa atgtgtacct gtcatagttg aggacgtgac 360

tgataatgtg ccttcaggca ttccatcat 389

<210> 1825

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-003-Q1-E1-B12

<400> 1825

acgcctccct cctccccggc cgggacaaaa cggcggtctt tctccttcgg cccctcccgg 60

ctctttctgt gaggcgggaa ccaaggcgga tgccgaggcg acggggctcg cgcaccgcac 120

gcgtgtgccc gccgcccggg ggccaggcga ggtggtgagg tgaggccgag cgcgggttta 180

aattgttcac ccggccgccc ttctcgccgt agttttcagt ggtacaagca agggaggaac 240

gaacgtgagg gctgcctgcc tgctgcgga catgggctcc agcctcaagt accgatctgg 300

cctgtgcctc atcgtcgccg tcgtgctgat ctgggtcatc tctgccgagg tcacgcaggg 360

gatattcaca nagtacagac atccatttgc agttacttac ttgggggcct ccct 414

<210> 1826

<211> 354

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-003-Q1-E1-B3
 <400> 1826
 cgtcaacctg gatccaaccc ctacgaagcg gacgaggata gccattgccg aaatgcagcg 60
 gggccctctc cgggcgtctc tgccagctgg gtcggggcag gacgcccgat ctgttggtgc 120
 tccgccgaag cccaccattg gcggcgccct atcgtggatg tgggtggcagt cctgagcagc 180
 gaaagctctg tgcccgggtgc gcggggggtc ctatcacctt cgctcgggtct gctccaatgc 240
 ccattctcgg cgggtgccatg accttggcgg gactgggctc catggcggtc tccttgcagc 300
 gaaagctcca tgtcagtagc tggaaggtgc ccacctttgc aaggcccacg tcat 354

<210> 1827
 <211> 382
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-003-Q1-E1-A1
 <400> 1827
 ctcacggggcc gatacacgcc tctagagtga gtcatectat ggaagctctc ttctttcttc 60
 ctctctctcg tcctctcgaa ttccgtctct tgtctctgtc ctctctcgctc ggcttccccg 120
 gttcttgaga ggggaaatag gaggcggagc cgaggagagg gatggggagg gacgagaggt 180
 tcccagtgtg ggacgccgcg ctcggcgctg gggtcgcgcg cgccttcgcc gctgggctcg 240
 tcgggggttta cctttccatg ccggactccg actacagctt cctcaagctg ccacgtaatc 300
 tccaggaact ccaaactctc actggccatc ttgagaacta tactagcgac tacaccctac 360
 aggtgttggt aggtactgc gc 382

<210> 1828
 <211> 256
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-003-Q1-E1-A10
 <400> 1828
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gcaggcccca gctgaggccg ccgtctccac acccaagggt gcgcccagg ccactccaat 120
ctccgttgag gttgcggtg atgaacaggt agctgagaag gtggtggtgg aggagccggc 180
tgccgcggcc gacgttgagc atcaaaaggc taatgaagtg gtcgctccag aagcggccgt 240
cgccgagccc gattac 256

<210> 1829
<211> 225
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F9

<400> 1829

ggaactcgcg cgcacgacaa caaggcgag cataggtaca cccgttgac ccgcttgct 60
ggccctctgc gctgtgtgcc ggcatcgccg aagaggtcag cggccgcaga tttcaaggca 120
gggacgagca acggtaacgc agtcagcgtc aaatcaatcc atgacgacgt ctgatagatc 180
ctgtgagatg acctgaagg gacgttacta ggcgtgtgta ttttc 225

<210> 1830
<211> 139
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H3

<400> 1830

cagggactcg ctgtcgtctt cgcccaaagg gcccgacgtc gagctgccgc acgcgaactt 60
cacctggac cgcctcatcc agatgttcgg cgccaagggg gtcacggttc aagagctggt 120
ggcgtgtcc ggggcccaa 139

<210> 1831
<211> 344
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-051-Q1-E1-H4

<400> 1831

atcaggggtcg agcacacgta cacgacatta tcgatcgaaa actcgccctc gtccgggaag 60
 ggtaaatttg gtcctccccg ggccgggtgt tcaatggaaa aacaaccaac ggtggccaag 120
 ttcggcacct gggacagcgg cgatcccggg tacacggcct acttcgacaa ggtgcgcgag 180
 aacaagggcg ccacggcgcc gccgctgcgc cggccgcgca gcccacga ccccgacccc 240
 gaccgcgagc ccgagccaga ggaggggcca atgangagag tccccgcgcg tcgtcgtcaa 300
 ggccggcgac cgcgggaggc caccgcgagc cgccgcgcgc gggg 344

<210> 1832
 <211> 150
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H7

<400> 1832
 tcgcgctggc gtccggggtt gctggtccac catgaccggc gggcctcggg acccgattcc 60
 gctggggcgc aaggactcgc tgtcgccgtc tcccacaggg tccgaagtcg agctgacgca 120
 cgtcaacttc atcgtcggcc ggctcatcca 150

<210> 1833
 <211> 217
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H8

<400> 1833
 ggcccccgaa ggtgccgcc gttcccaaca tcaccaccaa ctacaacgga aagtggctca 60
 ccgccagggc cacctgatac ggtcagccca acggtgccag cgctcctgac aacggcgggtg 120
 cgtgcgggat caagaacgtg aacctgccac cctacagcgg catgacggca tgcggcaacg 180
 tccccatctt caaggacggc aagggtgcg gctcatg 217

<210> 1834
 <211> 203
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A11

<400> 1834

cgccccgac gccgtgccct acctccagcc gtccttgccc ttctgtccg cggcgcggtc 60

cccgttcctc atcaactgct accctactt cgcgtacaag gccgaccgg gcaacgtgcc 120

gctcgagtac gtctgtttcc agcccagcgc cgccggggtc accgacgccg gcacggggct 180

caagtacgac aacatgctgt acg 203

<210> 1835

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G3

<400> 1835

cacatgataa aaccagtggc atttgagctt ggcattcctc ctgaaaacat cactgcgaac 60

caattgttac ttggcacatt gggggagtac gccggatttg atcccacaga gccacttca 120

cacagtgggg gtaaagcaaa agcagtgcac cacatagcac aggaccatgg ctacatgaca 180

gttggtatga gtggcgatgg cgcaactgat ctggaagctc ggcaacctgg cggagcagac 240

ttgttcattc gttacgccgg ggttcagatt agagagccag tcgcagcaca agctgactgg 300

gtgggttttg attttcaaga gccgatcact aacttgccat caattcatta actaaccxaa 360

tttatgaaac ctttgcattt gcccggaaca gaaattgcgg 400

<210> 1836

<211> 107

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D10

<400> 1836

acaacaccct gaggtgagtc gtattaagtc ttctgcactg tgcattggtgt caacgcgcac 60

tcacaagata agaattctga atcctcggcg cctgggtgggt cattaga 107

<210> 1837

<211> 289

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C11

<400> 1837

cgctcctatta gctcttctgc accgtacatg gtgataaggc aaactcaaag gacaaccatt 60
caaaagcgtc cgggccctgt gggtccttcg acatcaccaa gttgggcgcc tctgtcaatg 120
gcaacaccgt tagcacgaag gctgtgcacg aggcgtgtgc atcggcgtgc ggcggcaccg 180
ggaaccacac gatcctcatc cccaaaggcg acttccctcg cggactactc aacttcacac 240
gcccattgcaa aggcgacgtg accatccagg tgaatggcaa tctgctggc 289

<210> 1838

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-G9

<400> 1838

aagcttgcaa aaacttcctc ggtcaatcag ggcattgcta gagcttagat gcctttgtct 60
ctatggaact tccctaagct atgtaccaa ggggtgttgg aaattgaagc atctcaatca 120
tctagatggc ctaatcattg gtcattgcaa caatgcgcct gaagggttgt gaacttagat 180
gaccttaaag cattgtcaga actaaggcac cttcatatan agagtttggga tagggctact 240
tccggtgcgt ctgcactcgc aaacaagcca ttccatagagg atctgtacct ctctgagcaa 300
gcaccagcaa tagaaaatca ggaggatctg gaggacaaag atgaaacaga aaaag 355

<210> 1839

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H2

<400> 1839

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ctcgttccgt ctccctcgtc gtgggcgccc tgcctcctct ctccctcctc gtctccgccc 120
cggccagcgc gcggaccgtg ggcgacaccg tgcaggacgc gtgcagcaag acccagttcc 180
ccaagatctg cgtggacagc ctgcgccgga agccggagag ccagaaagcg acgccgcgca 240

agctggggga gctgttcgtg aacatcgcg gcgaaaaggg ggtcgggaat ggcaccttcg 300
 tgcaacgcag gttcagcgac aaggaggaca gcgacatgtc caggtgctac gacagctgct 360
 ccgacgacg 369

<210> 1840
 <211> 434
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-H3
 <400> 1840

ttcgcggggc caccacgcg atccgatcca ggacaaggag ggcattcccc cagaccagca 60
 gcggctcatc tttgctggaa agcagcttga ggacgggcgc acgcttgccg actacaacat 120
 ccagaaggag agcacctcc acttggtgct gcgcctcagg ggaggcatgc agatcttcgt 180
 gaagaccctg accggcaaga ctatcacctc cgaggtggag tcttcagaca ccatcgacaa 240
 tgtcaaggcc aagatccagg acaaggaggg catcccaccg gaccagcagc gtttgatctt 300
 cgctggcaag cagctggagg atggccgcac ccttgccgat tacaacatcc agaaggagag 360
 caccctccac ctggtgctcc gtctcaaggg tggatgcag atctttgtga agacactcac 420
 tggcaagaca atca 434

<210> 1841
 <211> 276
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-H9
 <400> 1841

tggggttcaa aaacacggcc ggcgcggaaa agcaccaggc ggttgcgctg ctggtgcagt 60
 cggacaagtc aatcttcctc aactgcaaga tggagggggt ccaggacacg ctgtacgcgc 120
 actccaaggc gcagttctac cgcaactgca tcctctccgg cacggtggac ttcattcttcg 180
 gcgacgcggc ggcggtgttc cagaactgca tcctggtgct gcggcgccc atggacaacc 240
 agcagaacat cgtgacggcg catggccgcg cggacg 276

<210> 1842
 <211> 116
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-E6

 <400> 1842

ccacgcgacc gacacgaccg ccggcgacga tgcaggatgg aggaatcaga taccggcgcg 60
 cggcgatcga tcgctccgcg cagctcatcg gcggcgacgt gcctgtgggtt cgctct 116

<210> 1843
 <211> 399
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-E7

 <400> 1843

cgcacgcgta cgagtcattg cgccgtcgtc gtccctgccg cggagcgcg ggcagctacc 60
 cgacccgccc tcaccgttca gtcacaacac ggggcaccac cccgtctccg tgcccaccac 120
 acctaggttg tccttatcgt gtcgtcgtt cgccacatg gtgaccccg ccaccgacac 180
 accgccgatc acgcccacca agaagcagga cgacaagccg aagccgacgc cggaggccgc 240
 caccgcccgc aactacgctt cgttgtggtc gcccaagcgc ctcatgcagc gcgctgccc 300
 cgctttccgc cgcagcaggt cgcgcgccc cgtcaggacg gtcaaggacc tcgccgagga 360
 acgggcctca gtgctcgccg ccagcaacaa ggtctccga 399

<210> 1844
 <211> 388
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-E8

 <400> 1844

cccacgcgat ccgaacagag ctactagcc agccagccag cagccagctt gctcgccgcg 60
 cccgtccttc ttctcgctt ccgttccatt ccgtcccgcc ctccaccgcc gccgcgcat 120
 tcaggatgg agatgaagaa gatcgctgc gccgtcctcg tcgccgctc ggccggccacc 180
 gtggcgctcg ccgcggaggc tccggctccg gccccacca gcggctcctc cgcgctcgcg 240

cccgccgctcg ggcgcgcct cggggccgcc gtcgcctcct tcttcgccta ctacattcag 300
 tgatccggcc ggggcgctcg gatgccgacg aagagacgac ggggagagag agtgacatgg 360
 ctggcgcgat tccgatgcgt gggcatgt 388

<210> 1845
 <211> 334
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-F1
 <400> 1845

cccgccacgg actgcaacta ggtccacgcg ctcacggatc acgccggcgt cctgctcaca 60
 aggaatgttg gtatctacga cagccagctt gtcgctaacc cgctcggcta tctcacagac 120
 gtggagctcg ccgtctgaga caccgctggc atcaagcagc atggaactca gcacgacgac 180
 aacgagcagt agactatagc acgggcgagt cccggacatg ctgcacaata ctacaccgat 240
 acacagcgaa cgcattggcat ggatagcact atctaccgca agaagtcgca cacaaggatc 300
 atgacagatg tatcacactg cttgattcac ttgc 334

<210> 1846
 <211> 422
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-F12
 <400> 1846

gtacggtgat gtccgggtga ctcacgcgtc cgagacaaga cgcgcatcaa tgctgctga 60
 taaggaggag gttctgcagg ctgctgtctc ccgcgttagt gcactggaag aggagcttgc 120
 agctacaaag aagaccttgc aggagactct tgagcgtcag ttggagatcg ttgcatacat 180
 tgagaagaag aagaaaagca agcgtttctt tcgttggtag aagcaaacag cagtgaattg 240
 ttcacgcccc cgagaaaaaa ggttttgcgt gtgatggaag cgagctgggtg cttgcgtatg 300
 ccagcaagct gcgattctga gtgtaacaca taaggatgtt ctttcattct tcttttttgt 360
 tcccttggtg catcaaattg tgccttaacc acgtcgatgt gctgccaaat tgtcaatccc 420
 tg 422

<210> 1847
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F2

<400> 1847

acgcgtccga ctggatggag tcgtgcagac cgacccccgc tgcctctgca tggctcctgga 60
 cggcaccgcc acgtccttcg gcatcgccat caaccagacc agggcactgg agtccccggg 120
 cgtctgcaag gtcaaggcgc cgccgctcag ccagtgcaca ggcgcccttg cggcacctgc 180
 accgacgcct cccgacgaac cagcagcggc agcggaggaa gaagccgaca cagctgcaga 240
 tgcgccttca gcaaattgga gcctcaagcc tcacagactc aaagaatgca gcgagcttac 300
 tgcttctcat ctgcgcttgc ctgtatgcct tctaataagt ggtgatacaa cttcgctggc 360
 catgtcaccg tgcaggaatt aggtctttcc ctgagtcctg actatgtact tacc 415

<210> 1848
 <211> 372
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F3

<400> 1848

tcgtctcacc ctccctccct cacacaaata atacggaaag gtcgcgccct tttcctccga 60
 catccacagc gggggagggg aaaacacgta cattcaccgc gcggcaataa tggcctcggt 120
 tccggctccg gcgacgacga ccgcccgt catcctatgc ctatgcgtcg tcctctcctg 180
 tgccgcgggt gacgaccga acctccccga ctacgtcatc cagggccgcg tgtactgcga 240
 cacctgccgc gcccggttcg tgaccaacgt caccgagtag atcgcgggcg ccaaggtgag 300
 gctggagtgc aagcacttcg gcaccggcaa gctccagcgc gccatcgacg gggtcaccga 360
 cgcgaccggc ac 372

<210> 1849
 <211> 257
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F9

<400> 1849

tcaaccagcc caccgccacc tccgacctct tcggcgacaa ccattgctat cgccagctgt 60
ccgagctcgc acaatcatgc ggtcaaagct cgccgaagtg gccaaagtca aggagctgca 120
cacactcaag ggacacgtcc agtccgtcgt caatctcaag ggccctccaca ttgacaccat 180
tcagcagagc tacaccgtgt aaactcgact caatTTTTTT aattgctttt tttttcatac 240
acatacaaac cacacac 257

<210> 1850

<211> 318

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-G2

<400> 1850

gggcccggcc ggcgtccggac tcaactaccc cgccttcacg cctccctcac caaataaggt 60
cncgcccttt tccgacattc acagggggga caggaaatca gcggccatgg cctcgattcc 120
ggcgacgacc ttgcgcgtca tcttatccgt cctctttctgt gccgcggctg gcaccgccgt 180
cgacaacgac ctccccgact acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc 240
cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc aaagtgaggc tggagtgcaa 300
gcactttcgg aacgggaa 318

<210> 1851

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E4

<400> 1851

ggggccagca cgcgtccgac cctgacgatc gggaaacagc agaaaatgtc tgccttcattg 60
agcttccagc aaagcgtgca agctgcaggc ctgccaggca gccagcccaa ccagacgacg 120
gagctggacc ttttccaaga cctgcagttg cctcaggccg gggcgagag cacaaacca 180

ttctctgatg agagcggttca gggataccca cagtacatga acgggcccac cggcgacaac 240
gcacagccag gccaggactt ccaacagcag tctctgaagc taccggcggc gagcccgtag 300
gacaatttcc taagggctgc tggctgttag gagtccagtt acatgaacga caaccacctc 360
acctcaagat agtcccaacg gaagatcctg caatttttcc ataatttgca gggaaaga 418

<210> 1852
<211> 284
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D2

<400> 1852

tacaacactc taacctgagt cgtatgacat cgccctcggc tccgccaagg gcttggctta 60
cctgcacgaa gattgccacc ccaggatcat ccaccgcgac atcaaggcag ccaacatcct 120
tcgggacgag aatttcgagg ctaaggtcgc ggatttcgga cttgccaagc tgaccacaga 180
caccaacacg cacgtctcca cgcgtgtcat gggaactttc gggatatttg ccccgagta 240
cgcgtcgagc ggcaagctca ccgacaagtc cgacgtgttc cccc 284

<210> 1853
<211> 381
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D3

<400> 1853

acatctctgg atgttacagc gatggatcgc atcatgtac ttatccttgt gtgcatcggc 60
ctggactgat tcggcgctct ggacgccgtc gatgtgagaa cgggctctgg ccttggttcc 120
atcctcctaa agctcctgtc tgttgtgtac ggcaacaagg ccacgcttga ggtcaatgag 180
taccgcctcc gccaaagttc gacttctgta gttgaaccat acaagactgt agtgtccact 240
gactccctct tcgagcagac tgatgttget aaacagcttg atcataatgc catctacgac 300
attagcctgc gatcccttga cattggaacc gcaacctaca ccaggctcaa cacgcttgtg 360
tcccaggtta tcgcatcctc t 381

<210> 1854

<211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-D4

 <400> 1854

 cgggtccagc cacgcgtccg cacgattaca accccaccct gcactcaagg agtgcttttg 60
 actatcatga gcaaggtagc agatgcatcc aaggaggaga tccactccat cgagtcggtg 120
 aaggaggcaa atgcacggcc ggctcagaaa atcaacagcc gcgttggttcg ctactacaaa 180
 gcagcaggag ccacagaagc gccggcgccg gcgccggcgc cagaagcaac ctgatcgagg 240
 agaacgtgag ccttgaagac gtaccacgat gcttctttgt tcggcttcct agatatactc 300
 gaaagctcgt gtgctgagta ttgacagttt cgttggtgaa acaggttaga acagtagctc 360
 accctcccga gagtatgggt tgaaaatctt tg 392

<210> 1855
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-D5

 <400> 1855

 gcgtccgaag agatgcgctg cgtggacagc cctagcgggt gcaagcccag cgcggcgaca 60
 ctggtggtga cggcgaccga cctgtgcccg cccaacgacc agcagtcgcg ggacagcggc 120
 ggggtggtgca acccgccgcg ggagcacttc gacctcagca tgcccgcggt cctccagatc 180
 gcacaggaga aggcggcat cgtgcccac tctaccgca ggggtggcgtg cacgaagcag 240
 ggtggcatcc ggtacaccat caccgggaac aagtacttca acatggtgac gatcaccaac 300
 gtaggcggcg cggcgacat cgcggcggtg tcggtgaagg ggagcaagcg cgttaagtgg 360
 acggagatga agcgcaactg ggggcaagtg tggcagaccg gggacgaact caactgcgag 420
 t 421

<210> 1856
 <211> 442
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D6

<400> 1856

cccacgcgac cgacggcgtg cggcggggac gaccagcagc cgccgtccat ggccgcgatg 60
ccggcgtcgc tgcgcgccat ccaggccagg aggaagcacg aggcggcgca gcgcgggggtg 120
cggcggggcga cggccacgag cgcggccggg tgcgcgtggg cggccctcgt caaggccgtg 180
gaggccgtcc agggcgcggc ggccgggggc gccgcggagg ccgcgcgcgg cgccggggac 240
gccgtggcgt ggggtgttcag caaggtccac ctccagtcgc ccgacctccc cgtcggggctg 300
ctcgggatgg tcgcctgttg ctcgggcacg atcgtggagg cggcgaggtg ccgcgtggac 360
gcgaggaagc ccgaaggcgg ccccggcggg cacgcggggg ggcgaacgcc ccggagggga 420
acggggcccc cgcgaggagaa cc 442

<210> 1857

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D8

<400> 1857

acgcatccga caccaccggc ccagtaagc tcacctctc cagttgtcac ccctgccccg 60
ccgaagaaag aagagcagtc attaccacca ccagcagaat cccaaccccc accatcattc 120
aatgacatca tccttcacc tatcatggcc aacaagtagc catctccgcc tccccctcag 180
ttccaagggt attaagcgcc acagagacat ggttgatgaa gcatgaatgg aacagtctat 240
aaggtcacat gcgcagacaa actgctacat gtaaaacact gcaagcgtgt gtgaaattgt 300
ttttttcttt tgcacgtgca cgcgtgagta aattcttatt cgtacatatg tccggacgtg 360
tgtatgtgtg aactagctgc actacatgac gctgcaacgt gtaagaaagt gtgatttgtg 420
tg 422

<210> 1858

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-D9

<400> 1858

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ctagcgggtgg ccgccgatgt cgccaacgcc ggccacgcca agcccctgac gcctggcggg 120

cgcggtggtac acgacaacca cggcaagtgc acggccggggc cgtggaaacc agcccacgcg 180

accttctacg gcgggcgggg cgggtccggc accacggagg gcgcgtgcgg gtacaaagac 240

acgcgcgcgc aaggggtaca gcgtgcagac ggtggccgtg agcacggtgt tgtttgggca 300

agggctctgc ctgcggcggg gtgctacgat gtgcgggtgcg ttgacagtcc cagcgggtgc 360

aagcccgcgc cggcggcgcct ggtggtgacg gcgaccgacc tgtgcccnac gcaagacaag 420

tggtgcaagc cgccgc 436

<210> 1859

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E10

<400> 1859

tcccgggggc acccacgcgt ccgaaaacgc gtccgtagaa aatcaggagg atctggagga 60

caaagatgaa acagaaaaag aagagaagga acgacaggaa agaagcaatg gccaatgcag 120

aggagatgag tcagggaag ctagtgaaaa gatatggaat gagctcaacc caccacagag 180

catcaagaag ctggtaatca agaactacaa aggcgtaaag tttccaaaat ggataaaaag 240

tccaagcta ggagactcct tcccagcct tgtgtttttg gatcttgaaa actgcatgtc 300

atgtactaaa ctgccttcac ttggcctcct gagtcaacte cagtcgctgc aaatctcaga 360

tgcagactca gtcatcacca tcggt 385

<210> 1860

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E11

<400> 1860

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acggccattg tcgtcgctt ctccgcctta ttccggcacga cgtccggcgc cgcgctagt 120
 ggtgactcgt gcagagcgtc atcgtccacc tcggacggag gcagctgcgg caaggggctt 180
 cgttgacca cctgcgtgcc tccaccgggg acaggtccgg ccgcgtgcgc gcggaccacg 240
 cccgtggacc caaagacaca cggcacgggt ctccccctca acaggtactc atggctgacg 300
 acgcacaact cgtttgctgt ggtaagcacc aagtcctcgc tgggggtctg ccatcatctc 360
 tccgccaac catgaggact cggtgaccga ccacctgaag aacggcctgc ggggcctgat 420
 cctggatgcc ta 432

<210> 1861
 <211> 352
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-E2
 <400> 1861

cgtccgagat gaagccatct gccattgcc ttgtgtgagg gagacgacgt gaaagaagac 60
 caagggccac gagatggctc tgcgcggcaa cctgcccgctg ctgctccttt tgttcgcgc 120
 ggcggccacc gcgagcggta agtcggcgag gctcgacctt ttcccagcag caccgggagc 180
 atccgctagc gcgcgggcga agggcgaccg gcgcggcaa gcgtacatct ccgccacct 240
 cccgtcgcgc cgggggggaa ggcagaaggt tgccgcggaa gtggcatcgt cgtccgcgt 300
 ccccttgctt atgtcgtcgg gggcctacct atgcacaagg cagtactttg tg 352

<210> 1862
 <211> 425
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-E3
 <400> 1862

ggggccagcc acgcgtccga gcgagtggca tctacgacag tgaagcagcg aagcaggctc 60
 agcagcgcca caactccacg tcgctggcga tgagtggcag agtggctggc atggtctctg 120
 gagccgctcc gtcgttgaag tgcgagggcg ccgtctgctt cttcctctca tcgctgatca 180
 tgtccgggtt ctgcatcatc gcttttggct tgagcttgat cctggtctac cgcacaaaga 240

tcggtgtacac aagtctatac gggaaaccgc gtacttgaag gatcaaccct aaatggacac 300
 agggttatca aagcatacgt caatTTTTTaa gttattagtc tggtagccca tgcctgtaga 360
 ggtacagtgt cggctctccc gttgttgtgc acaggttctc aagcagcatt tcaagttttc 420
 aagtt 425

<210> 1863
 <211> 426
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-050-Q1-E1-D11
 <400> 1863

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 gtgctcgact ggggtgaagaa actccaccaa gaaaagcagc taggcacgat ggtggacaag 120
 gacctgtgca gcagctacga cagggtggag ctggaggaga tggccaagt gtccttgctg 180
 tgcacgcagt accaccgctc ccaccggccc aggatgtccg aagtgatcag gatgctggac 240
 ggggacgggc tcgcggatag atgggacgcg tctcagaacg tggacacgcc ggagtccgctc 300
 tcgtcggagc tcctgctcca gaagtacatg gacttcgcag cggacgagtg ctcgctcggc 360
 ctgcaagcca tggagctctc cggcccgcag tgaccaaccg gcttgttgac cggacccggc 420
 ggcat 426

<210> 1864
 <211> 74
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-B5
 <400> 1864

agtcccatat catcttctgg cttgttcgtg ttggtctcaa tccatgtgga ttgggtggga 60
 ctggatgggt ttca 74

<210> 1865
 <211> 163
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B7

<400> 1865

catcatcttt caccatttcg tgccaagcat aaacaccctc cacctcgaca gcaaggccat 60

eggctgcctt cgcatggagc gcgcgacggg gtcggcagat atgatgaaga cgtactccct 120

actggacacg gtgcgcaggc acaccatcga gttgaacccc cgg 163

<210> 1866

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B9

<400> 1866

ctctccacat cgaaggcctc gtgccttctc ttcctccctg tcatggagga aatagctgtt 60

tcgcctatga tcgttgccgc cgtagtgctg gacaacaatg gcgctgacgc tgtctcctgc 120

actgccatcc cctaccgtaa caataagcct agatgagaaa gacaatatca atggggatgt 180

tcccacgatc acctcgcccg caagcaacga cgatgatgcy ttgttcagtg tcggagaatc 240

caccaaggac gatggccatc gcttgacgat ggaatgctcc actcacgtct cctccagtag 300

cccttccact cgcaagaagc gcggggcggt cagcctcttc aaggctatgt tcctg 355

<210> 1867

<211> 318

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C2

<400> 1867

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aggtcccgcc cttttcctcc gacatccaca acgggggagg ggaaaacacg tacattcacc 120

cggcggcaat aatggcctcg gttccggctc cggcgacgac gaccgccgcc gtcacctat 180

gcctatgcgt cgtcctctcc tgtgccgcyg ctgacgaccc gaacctcccc gactacgtca 240

tccacggccg cgtgtactgc gacacctgcc gccccgggtt cgttaccaac gtcacccagt 300

taatcccggg cgccaagg

318

<210> 1868

<211> 300

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C4

<400> 1868

acacgcctct aaagggattc ctgctacgct tccctgcgct tcccctccac cgcgtcgcgt 60

gggccctctg cgctacgagg gcttcaaagt gccctctgag cgcgtccctc cgtctagcgc 120

cctgccataa tgcacaccca gccatcttct gatcctcctg acacctcgaa catgaacgct 180

aagctggaga tccctaggca gcacgccatg ccgctgcgct ggtccctgcc gcggagcgca 240

agcgagctgc ccgaccgcc gtcgccgttc agctccaagt cggggccacca cccagtctcc 300

<210> 1869

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C5

<400> 1869

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gcagaactgt ttggcctgtg agctccctgt acattcgggt gcgatgtgag ctcctgcac 120

gttcgggtcga ggtctatcgt gacccacta tccgagattg atgtggatca ttgggttgac 180

atgtcagaca gtatacagcc ggtggcagag gaattcctgt ttgctgtggg taaagcttat 240

cttctgcttt cgtgtttttt cttgcttctt tcgattatgg tgtatgaatg tggtcattat 300

gtattagctg attacccttt cctgctaatt tggacttttag tacgcttcat taagtttggc 360

tgattactgt ttaacgggg 379

<210> 1870

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C7

<400> 1870

acgcgtccga atcacttccct cctcctcctc ctccctctctc caacacccca tccatcagcg 60

ctgccctccg cattgctctt gatcccatcc agtacatcga ttctccccc aagatcaaag 120

gccggaggag gaagaaaggt tagggagtcg gccatgggat gcttttcatg ctgctgtgtg 180

gcagatgacg acaacgttgg caggaggaag aagcatgacg atccctatgt tcctatccct 240

gctcatgttt ataatttttg acctagccgg ttcccagccc caaccctgt catctccact 300

ggcacagctc agccaattgc agtaccggcc agtcatctgg aagagctgaa ggaaattacg 360

aaaagacttc agcagtgatg ccctcat 387

<210> 1871

<211> 351

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C8

<400> 1871

ccggtacgat cctagattcg ccggtccacc cacgcgaccg acctcgaagt acttggccgc 60

ctcctggggc ggctgcact gggagcggca gatccgtgcg tccgcgcgcg cgaggcggcc 120

ccccgggtcc gccgctggcg ctgggatgtg ggtgctggtc acgggcgcgc cgggcttcgt 180

cggtagccac tgctccctcg cgctccgcaa gcgtggcgac ggagtcgctg gcgtcgacag 240

cttcaacgcc tactaccatc cgctcgctcac gaacgcgcgc atggcgctgc tggcctccca 300

tggtgtcttc gtcgctgagg gcgacatcaa ggacggccgt ttcttgtgca a 351

<210> 1872

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C9

<400> 1872

catataagct caacaacagc cagctcgcga aaataatgaa tagccgcagc atggcatcat 60

cggccgcgct cttggtgcta gccctcgcgc tagtggcggc caccgcccc aaggtagcgg 120

aggcaaagaa gaagagagcg gcggagagcg gcgaggcggc ggaggcgaag aagatccagg 180

acgacttctg ctcgacgctg tgcgagggca ataaggggac ggacctgggc gtgtgcaaag 240
 agtcctgcgc gctctcccag cagtccaacc tgggtgctgta cggcaggatc cagtgcaagg 300
 gcaaattgcac cgagcagaag ggcattcacgg cgccggccat g 341

<210> 1873
 <211> 251
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D1

<400> 1873

aaacccaaca cagaaacaca gactagaaaa agaaaaaaaa actataacca caaaataaaa 60
 aaaaaatcca aagacagcag cagaaagggg caacccccca agggatcaca tccatctcaa 120
 catgtccgtg ttcgctaaca ctcttcaat cttgtccctt aaattcactt cacgggcctt 180
 cgtttaaaac tttcgtgctg gggaaaactc tgtagttccc caatttagtc cttttggaga 240
 acacccccctt t 251

<210> 1874
 <211> 266
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B4

<400> 1874

gcgtccgaca cgagtccgga ggaggtggcc aaccccatcg tcatcgacca gtacttctgc 60
 ccgcagaagg tatgccctgg caagcggagc aactcctcgc atgtctccgt caaggacgtc 120
 acgttccgca acatcacggc cagtcattcc acgcccaggg ccatcagcct gctctgctcg 180
 gagacgcagc catgcagcgg cgtctccctc atcgatgtca acgtggacta cgccggcaag 240
 aacaacaaag ccatggccgt ctgcag 266

<210> 1875
 <211> 458
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H4

<400> 1875

tcgtggctgg ctgcgccacg acctctcctg ctgtcgctgc tggtcgccgt gctagcgggtg 60

gccgccgatg tcgccaacgc cggccacgcc aagcccctga cgcctggcgg gcgtgtggta 120

cacgacaacc acggcaagtt cacggccggg ccgtggaaac ccgcccacgc gaccttctac 180

ggcgggcggg acgggtccgg caccacggcg ggcgcgtgcg ggtacaagga cacgcgcacg 240

caggggtacg gcgtgcagac ggtggccgtg agcacgggtgc tgttcgggtga cggcacggcc 300

tgcggcgggt gctacgaggt gcggtgcgtg gacagcccta gcgggtgcaa gcccacgcg 360

gcggcactgg tgggtgacgg gaccgacctg tgcccgccca aggaccagtg gtgcaagcca 420

acgcggggagc acttcgacct cagcatgccc gcgttccct 458

<210> 1876

<211> 351

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A1

<400> 1876

atccgacgaa acacgcgtcg acctagtcgt cgtcgccctc ctccggcctcg ttttcgcagg 60

catgggttca gaactcgtca ttgttgtagc atcagacacg gtgtagatag catcaacgtg 120

gatgctggta ctaatcatga attcatcact tgtcttaatc aagatcacac ctgtgggaat 180

tctgacatct atacatatcc tgatgcgtgt tatcgcccaa aatcttcctc ctgagtccac 240

tacactcgag aacgtcatca ctcatgttcc tcaatgtgcc tcggtataca ctccaattct 300

tgatgctctt cacacagtgc atgatgggaa atttttacat ttgactgttc t 351

<210> 1877

<211> 320

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A12

<400> 1877

ctggaaaccc gatgccgtct acatttccaa cgtccaattc tactagactt tgaattccct 60

tcgattcatc cggcacagcg ggctatggac cttcagcagc aagctaatta agttggcagc 120

atgcaccgct aaccttatat actactgaga cttccaaatt ctagtatatg taatcctttt 180
 gttcgggttc atgatcgaat tccaaagagt ggaaaacaag caaaagggtta aatatacatg 240
 ccatttttgg aggcatTTTTT ttcattgagg catgttttoga tatatggacc actaaatata 300
 catatcattt acttttctac 320

<210> 1878
 <211> 186
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A5

<400> 1878

acgcgtccgc ctgctcctcc tcgccatctt catcccggt atcaccaccc ccgtcgaggc 60
 ccacattctc gccaggtgt ttggcgacga ccaattccaa cgggcagggc aaccagctgc 120
 acctcacgaa catctcccag gccttgccga tgctcccgag ggtgacaacg ccgcgcgaac 180
 tgctgc 186

<210> 1879
 <211> 282
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A6

<400> 1879

acgcgtccgc acacgcgtcc gccacgcgt ccgcaagaac gcaatggccg ctctttacaa 60
 tgagcttgag gaagaacgga gcgcttcggc ggtcgcggt agccagacga tggccatgat 120
 caatatgctg cacgatgaga aggctgcaat gcagatggag gctctgcagt acctgaggat 180
 gatggaacag catgctgacc accaccacct ggcgattcag gacctgcacg atttgcttac 240
 cgagagggag aaagagttgc ttgactttgg cgctgagctc gc 282

<210> 1880
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A8

<400> 1880

cggtccaccc acgcatccga gtaggtctgc catcaatgga aagccgggaa ctcataatgc 60

ggcgacttct gtcaaaggag aaagttgatg aaaggctgaa cttcaaggag ctagcaacca 120

tgacagaagg atatagtgga actgatctca agaacctgtg cacgacggca gcatatcgcc 180

ctgtgaggga gctaattccag aacgaaagaa agaaggagct ggagaagctg aagcgtgaaa 240

aaggagaaac tccatcggat cttccgaaga atgaagagac catcaccta atgccgctga 300

gcacggcaga tctgaatgaa tcaacaacc aggtggatcc atgccttacc aagtgcatt 360

tgccacgatg cggatgcaaa ttaacacttt tcaacttgag aaatagggtta a 411

<210> 1881

<211> 245

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A9

<400> 1881

ctgcaaata gtcacatgcac cccctcctcc ttcttgacac aaatccccctt tgtaatgaat 60

taaccatgca tgcacatgcac catgtatgca tgccccgggtg gttacgtgtc attcagctca 120

cgcgctgacc gagtctatac atacgtcgtc accggtggtg cacgcatgag ataaccatct 180

gatattgacc ggactatata atgtattcct aataatcctg cattttccaa gctaattgtt 240

ttttt 245

<210> 1882

<211> 386

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B12

<400> 1882

atgatagtga tgcaccgca cgtgaaggcg gagaacatgc tgctggaccg gaagcggacg 60

ctgaagatcg ccgacttcgg cgtggcgcg cgtggaggcg agagctgca ggtgacgggg 120

cagacgggca cgctgggcta catggcgccg gaggtgctgc aggggaagcc gtacgaccac 180

aagtgcgacg tgtacagctt cggcatcctg ctctgggaga cctactgctg cgccatggcc 240

taccccaact acagcctcgc cgacatctcc taccacgtcg tcaagctggg catccggccg 300
gacatcccgga ggtgctgccc gcgggcgctg gtggagatca tgacgcggtg ttgggaccgg 360
aaccgggaca accgggcgga gatgtc 386

<210> 1883
<211> 378
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B2

<400> 1883

ggggccacgc acgcgtccgg agacactgtg ggccgtctcc atgggcggcg gcgtgctccc 60
cggcaggtcg gacatggacg gccccgacgg cgagatggcg tacatgcgcg ggagcttcga 120
gcacaccgtc ggggtccggg actcggagtc gctctacatg gtcggaccgc ccggcggcga 180
ctgcccggag ctgcgccatct tcttcgttag gctatgaatt gaaccgagcg aaccatacga 240
atcgaacaat acagtgtaca cgtcgcagtc gtgggggtcta atctctcgcc tgggtctcgtt 300
cgttgttcag cagcctcagc tatcgtcaga gatattactc atttgcccca aaaggaaagg 360
gaaaaggcg ggcgctct 378

<210> 1884
<211> 275
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B3

<400> 1884

gggtccatcc acgcgtctaa agaaaatcga atcaacaaaa acaatgaata acaacaaaca 60
cagaaattaa aagatgacga attcagacac agaataacgc aaaagggggc ggccgtacta 120
taagatcaaa acttaggtca ccatgcatac aatctcatac atcttcgaaa aggtccccgc 180
aatccaatc cactggacgt ctattataat cctccagcac gggaaaaccc tgctctcacc 240
taacttacgc gctttgcacc atacccccct ttcac 275

<210> 1885
<211> 309
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H12

<400> 1885

gtcgtataga gccgcctcgg cgactccgtc agcatcccg c tgccgcgcgcg ggccgcgtcc 60

gagatggcga gggaccagga ccgctgatac agcgaccact gggggccgccg cgcctacgac 120

tcggtctcgc tcagcagcga ctccatgccc gtcctcacgg gacgcacgcc cgtcgagtgc 180

tacagctcct tcattcgccg gttccgccac cacttcgcca cgcaacctgc cagcacgata 240

tcggcgatct aggtcggcat gggccccgcc tgcgacctgc gctacctgtc gttctcggcg 300

agcaacggc 309

<210> 1886

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G12

<400> 1886

tccggaaaca atgggtgata ttgagaatca taataatcca attcaattca atgaccgccc 60

ctggatagag tcccctaact cgtggagatc actatgtgtt gtcacgcaat cagactgtca 120

tgctctgtca cacaatgctg acatttgcaa ccttcttgag agaaaaaagg tctcaaagtc 180

tcttgagagt gacttcagca ataaaatgaa ccagctgttg ctaacagctc tgcaaaaaca 240

aaggcaacaa cggatgatgg atgactttgg aggatactat gatgaacgca tgtactggag 300

acaaaatgat gaaattcgtg atgctgataa ggaggcatct gctccatgtt cattagcccc 360

tgtcgcacat cttggagctc atcagcaaga gagttggcag cattcttcat ttggaagtca 420

acatcaacac cagcataaac aaaa 444

<210> 1887

<211> 85

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G9

<400> 1887

cggtcgacc acgagtcgag gaaaaacagc agcctcgaat aagagccagc cagagagtct 60
aatagatctc tcaccgcctg ccatac 85

<210> 1888
<211> 345
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E12

<400> 1888

tcgtataaca gtaccagag agccatggcg ggtcgctctc ctgcgcgtca cggactttga 60
ctccttctcg ctgcgcaaag aacgcgaggt ccagctgcag cgcggcgcaa ccgggacgtg 120
gcgataaagg cttgatgaac ggcgagcctg acacaggacc tcggaatgca acagtgtcca 180
tgaccggcga cgttcgtgcc gatggacaac tgccccaatg agagcatcca gttttccaga 240
tgcaatgcca gagtaaagtt cagtagtggg aactgcacgg atgacctcgg cgagatcagg 300
agcctgtcgc tgaataaagt tccggagtag ctgtcgcttg catgc 345

<210> 1889
<211> 447
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-F1

<400> 1889

agccgaaggc ctgctgcctt ctcttctctc ctggcatgga ggaagtagct gtttcgccta 60
tgatcggttg cgcgtagtg ctggacaaca atggcgctga cgcggtctcc tgcactgcca 120
tccttagcgt aacaataagc ctagaggaga aagaaaatat caatggggat gttccacga 180
tcacctcggc cgcaagcaac gaggaggagg cgttggtcag tgcggagaa tccaccaagg 240
acgatggcca tcgcttgacg atggaatgct ccaactccgt ctctccagc agcccttcca 300
ctcgcaagaa gcgcggggcg ttcagcctct tcagggcgat gttcctgtcc ttcggccgga 360
gcgacgacag catgaagaag acagacgacg acaacacgag cccaagaag agagccatcg 420
cggctgctga tgacgattgc aagcctg 447

<210> 1890

<211> 313
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-C4

 <400> 1890

 accacgcgta cgccctagcg tccgaatgga cgtgtcagac gtatcgtgct cgactcggga 60
 catggtgtca gccataccgt ccccatctac cagggatacg ccctcccca cgccatcctt 120
 cgccttgatc tggccgggctg cgacctcacc gactacctga ttacgatcct gactgagcgc 180
 ggctactcct tcatcaccag cgctgagcgg gaaatcgtga gggacatgac tgagaagctc 240
 gcctacatcg ccctgcacta cgaccaggag atggagaccg cgaagaccag ctcttcctgtg 300
 gagaagagct acg 313

<210> 1891
 <211> 183
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-D4

 <400> 1891

 tgcacggacc gtgggcgaca ccgtgcaaga cgcgtgcagc aagacacaat tctccaggat 60
 ctgctgggac agcctcagcg cacagccaga gagccagaag gccaacccgc gccggctggc 120
 ggagctgttc gtgaacatcg gggcccagaa gggatccggg atggccacgt tcgtgcacgg 180
 gaa 183

<210> 1892
 <211> 251
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-D5

 <400> 1892

 actccctata gaacgtcgta ttatggaggc gatgtctagg ccggagatgg tcgacaagga 60
 ggtgggggatg cagtcattcc tgtgcagccg ggtgaatgac agcgatcggc ccgcgggtcat 120
 ggtcgtgca ggggcggcgc cgtcaggtgg gtcggagcag cgacgttatg tacgcgccac 180

tcaccaggct gatgcgcgag cgccagggtgc agcagggtca aggcgctctg tctgtgcgtt 240
cgagactgtc a 251

<210> 1893
<211> 335
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-E1

<400> 1893

gggtggcggc cgccatcacc ggctccgatt ccatcatcac cgctaccgc gagcactgta 60
cctacctcgc ccacggaggg gacctcgtct ccgcgttctc cgagctgatg ggccgctagg 120
gcggttgctc ccgcaggaat ggcggggtcca tgcatttcga taggaaggat gccaatctct 180
acggcaggca cggcacgtc tgcgcgcgtg tgcccgctcg atggcgccctc gccttcaccc 240
agaagtacag gaaggatgag acggccacgt ttgccctcga tcgtgacggg tgcggtgtaa 300
gcagggacag ctcttttatg ctctcaagat ttcgg 335

<210> 1894
<211> 469
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-A9

<400> 1894

ccgctcaaca aagatagcat agcagcagca ctcaaatag caaaaaccac catccgtcgt 60
cgccaaccgt agcaaggagc caaggacatc accaccgccc agcaataatg gcgcagagca 120
tgaggattgt ggcgctggcc ttggtggccc tgctggtggt ggcgggcggcg gcgcccgtgg 180
ccaccgcgta cggctgctac gacgactgct acgagcgctg cgccaacggc aagaaagacc 240
ccgcctgcac caagatgtgc aaccaggcgt gcggctccac ggaccagggc gccggtgccg 300
ccggcgccgc gccggttga tcgcccagcg cattcatcgc ttcagctcga tataatcgt 360
gctccgtcag caaccacat atgattcgat caatcttctt cctctaattt ctgaccccg 420
tcgaattttt ttcttttcta ttcttctact atactactat tatctgttt 469

<210> 1895

<211> 502
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-B1

 <400> 1895

 ggtccggtag tcccacgcgt ccgccaagc gtccgcgaag ccgaaggcct cgtgccttct 60
 ctctctccct ggcatggagg aagtagctgt ttgcctatg atcggtgccg ccgtagtgct 120
 ggacaacaat ggcgctgacg cggctctcctg cactgccatc cctagcgtaa caataagcct 180
 agaggagaaa gaaaatatca atggggatgt tcccacgac acctcggccg caagcaacga 240
 ggaggaggcg ttgttcagtg tcggagaatc caccaaggac gatggccatc gcttgacgat 300
 ggaatgctcc actcccgctc cctccagtag cccttccact cgcaagaagc gcggggcggt 360
 cagcctcttc agggcgatgt tcctgtcctt cggccggagc gacgacagca tgaagaagac 420
 agacgacgac accacgagcc ccaagaagag agccatcgcg gctgctgatg acgattgcaa 480
 gcctgccggt gacgagtcaa cg 502

<210> 1896
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-B11

 <400> 1896

 ggggtggacca cacgtccggt taacctctc ttgcattgca ttgcaggctg tagttgagca 60
 gcagcaacca ctgcacagga tgctgtggca gacgtacgtc gatgagcacc tcatgtgcga 120
 gatcgagggc caccacctga gctctgccg catagtcggc cacgacggcg ccgtttgggc 180
 ccagagcacc gcattccac agttcaggcc acaggagatg accaacaatca ttaaggactt 240
 cgacgagcct gggtttcttg ccccgatcgg cctcttccct ggccccacca agtacatggt 300
 catccaaggc gaccccgcg ctgtcatccg cgggaagaag ggatctggat gcatgactgt 360
 caagaagacc ggacaggcgc tggatgatcg catctacgac gagcccatga gcccgggaca 420
 gtgcaccatg 430

<210> 1897

<211> 341
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-B12

 <400> 1897

 tccggttaac ctctctttgc agtgcattgc aggtcgtagt tgagcagcag caaccactgc 60
 acaggatgtc gtggcagacg tacgtcgatg agcacctcat gtgcgagatc gagggccacc 120
 acctgagctc tgccgccata gtcagccacg acggcgccgt ttggggcccag agcaccgcat 180
 tcccacagtt caggccagag gagatgacca gcatcattaa ggacttcgac gagcctgggt 240
 ttctggcccc gatcggcctc ttccttggcc ccaccaagta catggtcac cagcgcgagc 300
 ccggcgctgt catccgcggg aagaagggat ctggaggcat a 341

<210> 1898
 <211> 180
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-049-Q1-E1-B4

 <400> 1898

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 ggcgatgctg gttgcgctgt ttgcggttgg tttgtgcacc ancccgctca cttccangt 120
 tggcaaggga ttcaagcctg gccacctgat cctcaccccc aatgttgcaa ccatatctga 180

<210> 1899
 <211> 398
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-048-Q1-E1-H2

 <400> 1899

 gtcggcccac gcgtccacaa tgacacgcgc acgcaggggt acggcgtgca gacggtggcc 60
 gtgagcacgg tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga cgtgcggtgc 120
 gtggacagcc ctagegggtg caagcccacg gcggcggcac tgggtggtgac ggtgaccgac 180
 ctgtgcccgc ccaaggacca gtggtgcaag ccaccgcggg agcacttcga cctcagcatg 240

cccgcggttcc tccagatcgc gcaagagaag gccggcatcg tgccgatctc ctaccgcagg 300
 gtggcggtgcg tgaagcaggg cggcatccgg tacaccatca ccggaacaa gtacttcaac 360
 atggtgacga tcaccaatgt gggcggcgct ggcgacat 398

<210> 1900
 <211> 434
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-048-Q1-E1-H4
 <400> 1900

cgggccaagc ctctagttca aggcgcatga ggtctacaag atctgctgc tggacatacg 60
 gctcgccaac gccgatcgcc acgccgaaa cataactcgtc cgcaagcacg acggcggcgg 120
 aggcggaggc atgtcgctgg ttcccatcga ccatggatac tgtctgccgg agagcttcga 180
 ggactgcact ttcgagtggc tctactggcc tcagtgcctg gagcgcttca gcgacaagac 240
 tgttgatac gtgctgacca cactgtctga ggaggacgtg actatgctga ggctccacgg 300
 gtgggacgtg tcgcgcgagt gcgcgcgcac gctgcgcgtc gccaccatgc tgctgaaaaa 360
 ggggtgtggag aagggcctca cgccttccac atcgggagca tcatgtgcag agagaccctg 420
 gacaaggggt cccc 434

<210> 1901
 <211> 323
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-048-Q1-E1-H6
 <400> 1901

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 tccccgccga tttcaaggcc ggcaccacct acaagaccac tctcagcatc tgatgagcct 120
 gtgatgagtg atgacgaata atatttccag tccacgtgtc aacgagccaa tattttaattt 180
 ttttcctatg tttatattgt ggcacaacac catctcttca tgtgccttgt tgtgttggat 240
 tgattttatt acatgaattg aatacaactgt ttatttaaga ttcttttggg tgaaatatag 300
 tgttcgggtc tattttcaaa agg 323

<210> 1902
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-H7

<400> 1902

gacacacgca tctacgatat cttctgccag acgtcgtacc tgcagcagca cctgcaccgg 60
 atcgcggtgc cgctgctggt gctgcacggc gccgacgacc tggtgaccga cccagggggc 120
 tcgcgggcgc tgtacgagcg ggctcgtcc gcggacaagt ccctcaagct ttacgacggg 180
 ctgctgcacg acctcctgat cgagcccag aaggacaggg tgatggacga catcgtcgcg 240
 tggctgagcc ccaggggtctg acgccgccgg cgcgttgccg tgctggccgt aggacgcgag 300
 cggcttttcg accatctgca ggccaaggac gcctcgctc cggatgggtg gtgatgacgc 360
 ggtctggtct ggtaggctgc gggccgacgg agagcgggtg tggcttctcg cc 412

<210> 1903
 <211> 320
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-A12

<400> 1903

acaccctata gaacgtcgta ttacctcaa taagagccag ccagagaaac taataaaaact 60
 ctcgccgccg ccatccgagc gaacaagcca accgaccccg tcccaaggc aatccgccgc 120
 cgacgtacca ccaccaccgc aggagcgaga tggagatgaa gaggatcctc ttcgccgtcc 180
 tcgtcgtcat cgcgcctcg gccaccgcag tgctggcctc caccgaagcc gccgccgcgg 240
 gcgccccaac tgctccgag tcagccgcg aggtcccgc tgctcgcgcg gctatcgtg 300
 ccgctggcgc ggccgccgcg 320

<210> 1904
 <211> 505
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-049-Q1-E1-A3

<400> 1904

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gccaacctg attgttcttc aaccaagagg aagaaaggaa ggaagggacc ggaagcatca 120
gccatgtcga actcggcgtc gggaatggcc gtctgtgatg aatgcaagct caagttccag 180
gagctcaagg caaagaggag cttccgcttc atcgtgttca agatcaacga gaacgtgcag 240
caggtggtgg tggacaggct gggggggcca ggagagagct acgacgcctt cacggcctgc 300
ttccccgcca acgagtgcg ctacgccgtg ttcgattttg acttcgtcac tgacgagaac 360
tgccagaaga gcaagatctt ctttatctct tgggccccgg atacatcgag ggtgagaagc 420
aagatgctgt acgcgagctc caanggacgg ttcaangang agctggatgg cattcaggtg 480
gagctacaag caaccgaccc gagcg 505

<210> 1905

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F3

<400> 1905

gccgacccaa gcctctacac agacgtcgta gtagagagtg cgtgcgtgca gccacaggca 60
ggcgtcggca ccatgtcttc tttcaccggc acgcaggaca agtgcgcgga gtgcgacaag 120
accgtccact tcatcgacct cctcacggcc gacggcgtea cctaccataa gacatgcttc 180
aagtgcagcc actgcaaagg gatcctctcg atgtgcagct actcttccat ggacggtgtg 240
ctgtactgca agaccactt cgagcagctc ttcaaggaga ccgggagctt ctccaagaac 300
ttcacgccag gtggcaagtc ttcagacaag ggtgaactga caagggcccc cagcaagcta 360
tcatctgcgt tttctggtac tcaggataag tgtgcagctt gccagaaaac agtg 414

<210> 1906

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F9

<400> 1906

gcgcgggtcg atacaacaac ctaaactgac gtcgtgagta gagcgatctc ctctccctct 60

ccctctccga tccattctcc agcgcagcga agtaaacaatg tctgaccggg caaagatgtc 120

gtggcaggcg tacgtggacg agcacctgat gtgcgagatc gagggccacc acctcgcggc 180

ggcggccatc gtcggccact acggtgccgc ctgagcgcag agcacggcgt tccccgagtt 240

caagaccgac gacatggcca acatcatgaa ggacttcaac gagccagggc acctcgcgcc 300

gacatgcctg ttcctcgggc ctaccaagta catggtcatc catggcgagc ctggtgccgt 360

catccgtggc aagaagggat caggagcat caccgtgaag aagacagggc aggcactcgt 420

ggttggcac caccacgacc cgatga 446

<210> 1907

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-G11

<400> 1907

gcgggtcggtt acaatactct acagtgagtc gtactaccat caccaccacc aagctcaaca 60

acagccagct cgcgaaaata atgaagagcc gcagcatggc atcatcggcc gcgctcttgg 120

tgctagccct cgcgctagtg gcggccaccg cccacaggt agcggaggca aagaagaaga 180

gagcggcgga gagcggcgag gcggcgagg cgaagaagat ccaggacgac ttctgctcga 240

cgctgtgcga gggcaagaag gggacggacc tggtcgtgtg caaggagtcc tgcgcgctct 300

cccagcagtc caacctggtg ctgtacggca ggattcagtg caagggcaag tgcaccgagc 360

agaagggcat cacggcgccg gccatgaagg tctgccaaga agagtccac aaaggcttcc 420

ttgttaaagg cggcca 436

<210> 1908

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F2

<400> 1908

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cgacttcttc gtccctctct tcattaggag gctaacttgt catctgcagg atctgtgggg 120
tgacttgatt tagttatgga cttactggta cgcgctctga aagttcttct ggttcggcgt 180
atatgacttg cccaccgca ggcacgaggg tgcgatccgt atctcgtcct gttgcttcac 240
atcatctgtc ggcacatgtg agttgagaag cgatgcgtgt gatccttacc gcaggatgca 300
ggagcatctg actgtcatag atcgcagctt accatgtgaa tctggaggtg 350

<210> 1909
<211> 415
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-048-Q1-E1-D5

<400> 1909

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tgaagtgcga cgtggatatt aggaaggatc tgtatggcaa catcgtcctc tccggtggta 120
ccactatggt ccctggcatt gctgacagga tgagcaagga aatcaccgcc ctggctccta 180
gcagcatgaa gatcaagggt gttgctcctc cagaaaggaa gtcaccgccc tggctcctag 240
cagcatgaag atcaagggtg ttgctcctcc agaaaggaa tacagtgtct ggattggagg 300
atccatcctg gcatcgtcga gcacctcca gcagatgtgg attgccaaagg ctgagtacga 360
cgagtctggc ccgtccatcg tgcacangaa atgcttctaa ttctttgggc ccaag 415

<210> 1910
<211> 122
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-E2

<400> 1910

gctccaccgc ctccggggcc gacgacgcgc tgctgtcctt ttcccgccac tcccaatcca 60
tccccgatct ccaagttatt cctgttctct ttcagaattc gttgcatcaa ccaagcaag 120
at 122

<210> 1911
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-E8

<400> 1911

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 aggaccgtta tgaggccacc acaagttctt agggagggaa caaagaagac agtttttgtt 120
 aactttatgg atttgtgtaa aacgatgcat aggcaacctg agcatgtgat gatgttttta 180
 cttgctgaaa tgggaacaag cgggtcactt gatgggcagc aaaggttggt gatcaaagga 240
 agatttgccc ccaaaaactt tgaagcaatc ctgaggagat acatcaatga gtacgtcatc 300
 tgcaatggat gcaagagccc tgataccatt ctgtccaagg aaaatcgtct gttcttcctt 360
 cgctgcgaac agtgtggatc ttcaaggctc gttgctccaa tcaaagctgg at 412

<210> 1912
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-E9

<400> 1912

tcgcggggtcg atacacgcct ctgactacg tcgcggtacc acgaagtggc ctagggacga 60
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 gggccacggc catgggcgtt atgccatttg gtcccgggaa tggcgtcaag gacgatcatc 180
 cagcagccgt cacgtcgctc gtgagcggcg cgagcgggtga cggattgagc gtggacgagg 240
 cttcgttcgt ggccacgacg agttcgggtga cctccatggt cgcggcgaag gaggagacgc 300
 ggcaagccgt tgcggatgat ctcaactctt cgagatcttg cccttgcgag tggttcgtct 360
 gtgaggatga tcagaacagc acgatatact tcgtgggttca gggctcagaa tcaattgctt 420
 cctggcaggg caaccttt 438

<210> 1913
 <211> 390
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F10

<400> 1913

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cctcacacaa ataataagga aagggtccgc ccttttctctc cgacatccac aggggggagg 120
ggaaaacacg tgcattcacc cggcggtaat aatggcctcg gttccggctc cggcgacgac 180
gaccgcccgc gtaatcctat gcctatgctg catcctctcc tgtgccgagg ctgacgaccc 240
caacctcccc gactacgtca tccacggccg cgtgtactgc gacacctgcc gcgccgggtt 300
cgtgaccaac gtcaccgagt acatcgcggg cgccaagggtg atgctggagt gcatgcactt 360
cggcacccggc aagctccaac gccccatcga 390

<210> 1914

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-F11

<400> 1914

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ttctcctttt cttgccacgg caaaacacct tcgccggcga gagcatggcg atggcgtagc 120
gtgtcctgga ggtcaccctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc 180
ggactcgcat ctacgccgtg gcttccatct ccggattcga cctccgcac cttcccaca 240
gcaccaagc agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc 300
ccatcccggc tgcgctgac acccgcgcc tcgcactcca cgtgaggctc cgcgccagc 360
gtctatacct gggcgatcgc gacatcgcg aggtgtttgt gcccatcgac gacctcct 418

<210> 1915

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-D3

<400> 1915

ggtcgaccca agcctctaaa ttgagtcata tgagaataaa tagttcgtga atccctgaag 60

cgtgcatata tatattcctg ccaagataaa ggtaatggag tcgtcacgca ggttccagcc 120
 ggccgtcatc ctgcttctcc tgctcattgt gtccaccgat atggcacagg caagggaatg 180
 cgagaagtac agtgagcgat ttgttggggc atgcatgac gcagacaact gcgccaatgt 240
 gtgccgcggt gagggcttct tggccggcag gtgcagcacc ttccgccgcc gctgcatctg 300
 cactaagcag tgctaaacaa gatcgctcga tcgttcgcca tgcacgcaca acctattctt 360
 aataacgttc attatctcgt tcttatttat gacgaatgtc atgtatgttc tggtgactgt 420
 catgt 425

<210> 1916
 <211> 399
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-048-Q1-E1-B7
 <400> 1916

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 atgggcgact catccgggat cagcatcacc aacaccgtca ttggcgctcg cgacgactgc 180
 atctccatcg gccccgggac ctccaagggtg aacatcaccg gcgtgacctg cggccctggc 240
 cacggcatca gcacggcag cctagggcgg tacaaggacg agaaggacgt cacggacatc 300
 aacgtcaagg attgcactct taagaagacg atgttcggcg tccgcatcaa agcgtacgag 360
 gacaccgcct ccgtgctcac cgtctccaag atccactac 399

<210> 1917
 <211> 441
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-048-Q1-E1-B9
 <400> 1917

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 ctccctggca tggaggaagt agctgtttcg cctatgatcg ttgccgccgt agtgctggac 120
 aacaatggcg ccgacgcggt ctctgcact gccatcccta gcgtaacaat aagcctagag 180

gagaaagaaa atatcaatgg ggatgttccc acgatcacct cggccgcaag caacgaggag 240
gaggcgttgt tcagtgtcgg agaatccacc aaggacgatg gccatcgctt gacgatggaa 300
tgcaccactc ccgtctcctc cagtagccct tccactcgca agaagcgcg ggcgttcagc 360
ctcttcaggg cgatgttcct gtccttcggc cggagcgacg acagcatgaa gaagacagac 420
gacgacacca cgagcccca g 441

<210> 1918
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-C10

<400> 1918
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ggttgtggcg ttggtgttct tggtagagagg cgcattggtgc ggtcctcca aagtcccccc 120
aggcaagaac atcacggcca cctatggcaa ggactggctg gacgctaaag cgacatggta 180
tggcaagccg acgggtgccg gtcccgcga taacgggtggc ggctgcgggt acaaggacgt 240
gaacaagccc ccttcaata gcatgggcgc atgcggcaac atccccatct tcaaggatgg 300
tctgggttgt gggctctgct tcgagatcaa gtgcgataag cctgtggagt gtcgggcaa 360
gcccgtggtg gtgcacatca cggacatgaa c 391

<210> 1919
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-C9

<400> 1919
gggtcgacac acgactctac atcgctgcct gccagggaga ggggaagtca gaggcacgga 60
gtggcgcaga gcagacgccc gtgaaccatt gtagctgtcc ctgtcgctgt cgtcgtcaac 120
gaaccacac aaggaaagga tggagaagaa gccgaccatc ctcataaaca ggtacgagct 180
cgggcgcacg ctggggcagg gcaccttcgc caagggtgtac cacggccgga acctcgcgtc 240
cggcgagagc gtggccatca aggtcatcga caaggagaag gtgatgcgcg tcggcatgat 300

cgaccagatc aagcgcgaga tctccgtcat gcgcctcgtc cgccacccca acgtcgtgca 360
gctgcacgag gtgatggcca gcaagagcaa gatatacttc gccatggagt acgtccgggg 420
c 421

<210> 1920
<211> 347
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-D1

<400> 1920

tccctagagt atgtcgtgtt acgtcctcgt cgccgcctcg gcggccaccg tggcgctcgc 60
cgcgaggagct ccggctccgg gccccaccag cggctcctcc gccgtcgcgc ccgccgtcgg 120
cgccgccctc ggggcccgtg tcgcctcgtt cttcaacgac tacattcact gagcctcgtc 180
gcggccggtc gctcggaggc cgtgcgcgct acgaaacggg atatagagtc tcatcgctgc 240
acgcattccg atacgtgggc agctcttcga ttcgagacat cttgtgtccg cattggcgga 300
ttcagcccgg tatccctcag taacctccat catgcatggc ttgtcat 347

<210> 1921
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-D10

<400> 1921

gacacacgcc tctacagtga ctctgtctag tcgtcgtctc actcaccccg ccttcacgcc 60
tccctcacca aataagggtc cgcccttttc cgacattcac agggggggaca ggaaatcagc 120
ggccatggcc tcgattccgg cgacgacctt cgccgtcctc ttatccgtcc tcttctgtgc 180
cgcggtggc accgccgtcg acaacgacct ccccgactac gtcattccagg gcccgctcta 240
ttgcgacacc tgccgcgcgc ggttcgtgac caatgtcacc gagtacatcg cgggcgccaa 300
ggtgaggctg gagtgaagc acttcggcac cggcaagctc gagcgctcca tcgacggggt 360
gaccgacggg aacggcacgt acacgatcga gctcaatgac agccacgagg aggacat 417

<210> 1922
 <211> 337
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-048-Q1-E1-D2

 <400> 1922

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 actaaatttt gttgataata atggcaagtg cttcctggag atgagttact actttgagat 120
 tagaaaggag tggccaggaa ctcaatgatg tgtggacgga ccagcatggc tgactcgtcg 180
 gagtatgtta gagctcatag ctaagccaag cacaagatgt ggactcatct tcaagaatga 240
 ttcatcgcgt acttcatcgt taatcgcatt ttaatttggt ttgaattgtc attgtacgtc 300
 gtttatgaca taaaactggt tattcatcac atatata 337

<210> 1923
 <211> 429
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-048-Q1-E1-B6

 <400> 1923

 tcgcgggtcg atacaaccct ctacagtgcc tcgtgatagc cccaacacgg atggcatcca 60
 catgggcgac tcatccggga tcaccatcac caacaccgtc attggcgctg gcgacgactg 120
 catctccatc ggccccggga cctccaaggt gaacatcacc ggcgtagacct gcggccctgg 180
 ccacggcatc agcatcggaa gcctagggcg gtacaaggac gagaaggacg tcacggacat 240
 caacgtcaag gattgcactc ttaagaagac gatgttcggc gtccgcatca aggcgtaga 300
 ggacgccgcc tccgtgctca ccgtctccaa gatccactac gagaatatca agatggagga 360
 ctcagccaac cccatcttca tcgacatgaa gtactgcccc aacaagttgt gtactgccaa 420
 cggcgcctc 429

<210> 1924
 <211> 435
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-048-Q1-E1-A11

<400> 1924

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gagcctgagg aacggcgcca tcacacctgtc ggtgcggccg agcgccacga actgcctcgc 180
cgacgagagc cacgtgtgct ggaggaacgg caagttcgcg caggacatga tcctccgcct 240
caggaacgtg gagagcgggg agattcagct gcagctgcag tgggtcagca tccctcctgc 300
tgcagccagc aggtgaagga aggaagaaca ggcgacacga agcaatcgca ttttcacctc 360
ttgtgaatgt cggattgtaa acttaatggg gtctgggtca gtcagggtag ttcattgtgt 420
gcctattaat gtaca 435

<210> 1925

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A12

<400> 1925

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ttggttctgt ccaggatattt tcaggctttg ttatcgcgaa ccttgcagat cgcttttctc 180
gttctctagg gctatcatag tctcataaaa cagaacaggc ccttattagt gcgtgcatca 240
ggaatctcga aggtcgggtt ggtaggcca atacttcaga taacctggat cgggagatgc 300
cagaaattat tttccctttg cttctttaaa catagtggag gtgaattttg ccgtggtgaa 360
tagtgaaagg cagcagatga agaagatcac atatgttata gcaacccttt gcaactgtaa 420
attctc 426

<210> 1926

<211> 226

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A4

<400> 1926

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 ctgtaatggg ttaccgtgta cattgcatag gttcatgtat atatatgcta ggtccttggt 120
 acatgcctac aaggtacagt tccattctgt tcgagagatg tacttatgca cacgggtctc 180
 tgtaacatcg atgcaataat ggccgggtga ctgtaagtgc acatac 226

<210> 1927
 <211> 246
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A7

<400> 1927

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 ccggtgatgg ttacacctag aagcatggga tgctcatcat cacactaaaa acctgtgctg 120
 ttgtgttgct gtgtctatcc cagtaatagt tcagttggta ccttatgttc gaggtttgtt 180
 gtaagtagac tgataaatca caattgcagg acccagtctg ctcattaaag ctctgtggga 240
 agaatg 246

<210> 1928
 <211> 428
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-048-Q1-E1-A8

<400> 1928

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 ggccaccacc tgacctccgc tgccatagtc ggccacgacg gcgcggtttg ggcccagagc 180
 accgcattcc cacagttcaa gacagaggag atgaccaaca tcatgaagga cttcgacgag 240
 cccgggttcc tggccccgac cggcctcttc ctcgccccca ccaagtacat ggtcatccaa 300
 ggcgagcccg gcgctgtcat ccgcgggaag aagggatctg gaggcataac tgtgaagaag 360
 acagggaag cgatggtggt cggcatctac gacgagccca tgacccccgg ccagtgaac 420
 atggtggt 428

<210> 1929
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-048-Q1-E1-A9

 <400> 1929

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cgcctctgaa gcttacaaca gcaggttgag gcagacgctt gacgccaagc agctcaagac  120
tggaatgatg cacaagggga aggtgaacag ggtggacttc tcagggccgc tgctgtcgca  180
gccccggcgc atcgacgagc tcctgcacat ccacgagcag cagatccggc aagctggtcg  240
ccggccatgg ttcattgaaag gcaccgagga ggaggagcac tgatggcaga gacacggcat  300
ggacacaact aaacgccccat cagatttgca cgtacttacc acagagcaag agaagatgct  360
ggaaacatat caaaggagtt ggaccgtgag ctagctctcc tgatgagcaa gtgtttttt  418
  
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<210> 1930
 <211> 447
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-048-Q1-E1-B10

 <400> 1930

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ctcgcggggtc gatacaagcc tctaaacaga cgtcctggta gacgcctgat gacgtgatat   60
acaagtacga gatagtggaa gtcgctgatg atttcactga ggagcgaggg ctgactgtca  120
tcccgttgct gaaggttgcc ggattcaaag ccgtcttcca cagacacgtg gatcccagag  180
aggtgaggag gataccaaag gaagagctgt tccggttctc gcaccggggt ctttctcgtc  240
tcctgacggg cgaagagggc agcaatgccc cgaaaggctg ccatgagctg gactctgctg  300
ccactccagt ggaccttctc aaggttatca cggagcacia ggaagacgcg gtggcgacga  360
gtcctaaata ggagtgagcg actccgataa cagcgaagat aacgtanctg gatgtctgag  420
tgaccagatc cccacttggt taatgac                                     447
  
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<210> 1931

<211> 433
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-048-Q1-E1-B12

 <400> 1931

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 cggcgatcga tggctccgag cagctcatcg gcggcgacgt gcctgtgcct cgctctcgcc 120
 gcggccacgc tggcgctggc ccacggggcg caaggaggag gaccatcggc atcggcgggc 180
 gacctggaca aggtcacggc cgagaccttc ttggacatcg agatcgacgg caagcctgca 240
 ggccggatcg tgctgggact gtttggggac accgttccta aaacagcaga gaacttccga 300
 gcactttgca caggggagaa aggaattgcc aagtccggca agcctctgtg gtacaagggg 360
 tcgacgttcc acaggatcat cccgggggttc atgatccang gaggcgactt caccaacggc 420
 aacggcacgg ggg 433

<210> 1932
 <211> 424
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-048-Q1-E1-B4

 <400> 1932

 gcggggccgat ccaagactct aaattaagtc gtagtaaccg cctgagagga aatacagtgt 60
 ctggatagga ggatccatcc ttgcctccct gagcaccttc caacagatgt ggatctcaaa 120
 ggctgagtat gacgagtcag gacctgggat tgttcacggg aagtgccttc aagctctggg 180
 tcccccttcg gctccatttt atttattcct tgagtgtttt tcatataagc tactatgttt 240
 gggattgcat gcctttgagc aggcaatgtt gttgaattta tattttggga tttatatttt 300
 gtggctcact acaatgcata cattgctcca gtccttttcc atgccaaatt tgttgctagt 360
 ggtgaaaaca tcaaccacan aaaagagagg atggaaatta ataaagtacc taggatcata 420
 ttat 424

<210> 1933

<211> 409
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-G8

 <400> 1933

 gggccgaccc acgcatccaa cctcctcgcc tcctccattg accaacaatt aagcctcccc 60
 gaccgccaca tctattaggt gcagccatgg gtgcctgtgc aacgaagcct aagacgcttg 120
 aggggaaagc cccagctgag gccaccatct ccacacccaa ggttgcacct gagaccacta 180
 ccatccacat tgaggttgcg gcaaaacatg cagtagttga gaaggtggag gaggacaagg 240
 aggaggcact aacagtggcg gcgaaacaag agccagcagc caccattgag cctcagcaga 300
 ttgctagtga ggtgaccact tcggaagtgg cggtcgtcgt tgtcgagcct gagaacaaag 360
 aggaggagga agttgtggag aagaccgtca tcgagaagga gaagccatc 409

<210> 1934
 <211> 358
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-H1

 <400> 1934

 aagcctctag agtcagtcgt aatatcatct ggacaacgac accaccaccg gtggcgccga 60
 tgacgtggca cgctgtccg cgcaacggct cgcactgccg gatgaaatcc gggtgcaaga 120
 accagctgcg gtggtcatta gagttggcag actggtgaag gccgaggctg aaagccgatg 180
 acagggaaga tcaggacgac ggtgaccaag cggtttctgg agatcgcttg gatcatatct 240
 atggaggact tctcgatcac ggaacgggaa gcctcgctgg cgcacgtgcc gtctcattgg 300
 actgctaagc taaccgctga ctatgacgct gcagcttcag tcatgactct cttctagg 358

<210> 1935
 <211> 408
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-H10

 <400> 1935

tgtgaaggaa gggggacgcg gaggaagatg gggctcgcgt tcgggaagct cttcagccgg 60
ctcttcgcca agaaggagat gcggatcctc atggtcggcc tcgacgccgc cggtaaaacc 120
accatcctct acaagctcaa gctcggcgag atcgtcacca ccatcccccac catcggtttc 180
aatgttgaaa ctgttgagta caagaacatt agcttcactg tctgggatgt cgggggtcag 240
gacaagatca gacctctttg gaggcattac ttccagaaca cccagggctc tatctttgtt 300
gtggacagca atgaccgtga ccgtgttggt gaagccagag atgagctcca caggatgctg 360
aacgaggatg agctacgtga tgctgtgctg cttgtttttg ccaacaag 408

<210> 1936
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-H12

<400> 1936

ccctaaagcg agtcgtatga aggcccgacc tcctgccctt gtacaacgca cgcacggtcc 60
ccgtcccaat ggcccagact ctgtccgccg cctcggagct ggccaccctg aagcgcccg 120
tcggcaacga cgggttcggc gatggcagca acaacggcag cgcgaccggc gagaagccca 180
agggcgggcg gggggaggcg gaccggcgcg cggcgatggc cggggcgcg cagcagttcg 240
gcgagcacgg cggcgtgaac atgtccatcg aggcgtcggc gacgttcacg gtgatggagc 300
cggacacgat gcggcggtcg ttgcggggcg agctggggcc cgaccgggga gacatgtaca 360
tctacagccg gcaacttcaa ccgacgggtc tggcgctggg gcggcagatg gcggcgct 418

<210> 1937
<211> 405
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-047-Q1-E1-H2

<400> 1937

gcgcggggcca atcctccaac caagcgtccg gatgatttcg ttagcgggtg aggtgacctc 60
accggcgctg gtggcgggcg cgaacttaac agtggggaag gaggtgggtga tttcactgac 120
gatggagggtg acctcaccgg caccggtggt ggcggtgatt taatcatcgg tggagggtgat 180

ggtggtgaag gagatttcac cggtggaggc ggttcaactca catatgctgg agatggaggt 240
gattttacta gtggtggtga gctaaccgaa accggtggag gaggggaattt ggtangtggg 300
ggagggcgagc taataggtgc tgggtgggggt ggagatttca ttgatggcgg tggatgaacta 360
atcggtgatg gtggtggcgg tgggtggtgac ctcaccggta ctggt 405

<210> 1938
<211> 364
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-H4

<400> 1938

gaatgtgaga acaatgtggt caccaatgcg ggctcaggtt gcaatgggtt tggagtgggt 60
gtccttgggg accggcgata ggggtggtcc tccaagattc cccgaagtca atctaatacac 120
gggcaactat gcgaaggact ggctggacgc taaagcgaca tggatatggca agccgacggg 180
tgccggtctc gacgataaca gtageggctg ctggtacaag gacgtgaaca agcgcccctt 240
caatagcatg ggcgcacgc gcaacatccc catcttcaag gatggtctgg gttgtgggtc 300
cagcttcgag atcaagtgcg ataagcctgt ggagtgtcc ggcaagcccc tgggtggtgca 360
catc 364

<210> 1939
<211> 403
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-047-Q1-E1-H6

<400> 1939

atacacgact ctagegtcag tctcgcacc ccgttcccgg aggtgtgcac gtccaccgcc 60
gggcggcacg cgtccaagta cccggtcatc gacaacctgg ccgtgctgaa catgcagggtg 120
gacgcgttcg ccaagcgcac cgcgcaggcg cgcaagcacg tcgcgaggtc ggccccgacc 180
atccccccgc agcagacgca tgcgctcacg ttctgcgaca ccaggtagat gaacacgcag 240
gacaccatcg gcgcggcgca acggggccatc acgttcaatg acaccggcac cgctaagatg 300

atgctgcagc tcgccgtcca ggacttcgac tcgtgcgacc gccccttcac acaggccggc 360
gtcnccaacc ccatggggaa gtttgacaag gagctcacac aga 403

<210> 1940
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-H8

<400> 1940

cgcgggccga tacacgcctc tagtctaagt catactaccc tcctcctgca gctcgccgcg 60
ctggacgcca tctccagcgc gcgtgcccc tctctgctca gatccgatgg ccgtcgagca 120
ctacacccgc agcgcgctcc tcgaccccc agatacctcc ttctcgtcta accatcgcca 180
accaatttcg gggagaagtg tgggggaatc gggtcgccag ctctgatcgt gcgccaccgt 240
aagctgtcca tctccgtgga gaattccctg cgtagcacat aattcgcgcg aggacacgtg 300
tcattctgaaa agcaagttgg tacctggaat ctcaagtgcc aggagaagag caggtgggttc 360
tggaggagcc acaaggcgag gagtatgatc tgatctaggt ggcgtttctc agatgac 417

<210> 1941
<211> 437
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-047-Q1-E1-F12

<400> 1941

cgtcgagaca cgcgctctaaa gtcactcggg cggacgcgtg ggacttgcta gggagatcta 60
caatgatgac aggatgactg aaaatttccc catttggtgtg tgggttgaca tgtccaagaa 120
tttatcgag ctagatttcc ttaaaacgat catcangggg gctgggtgcca atgttgggg 180
tacagaaaac aatgaggaac tcctcctcct cctcgcttct gccctttcca aaaggttct 240
ccttgctctg gatgacttg agagcccgag catatgggac aatctgctca aagattcatt 300
gggagatggt gttgtcagag gaagaatact gatcacaact cggaacgagg aagtggcaac 360
aagcatgaag gcaactatcc accatgttga caaaatggac cctgagagtg cctgngcatt 420
attgtgcaat caagttg 437

<210> 1942
 <211> 404
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-F8

<400> 1942

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ctcgcggggcc gatacacgcc tctaaaataa gtcattggcag tgaatgtgag aaccatgtgg 60
tcgtcgatgc gggcacaggt tgcgatgggt gtggcggttg tgttcttggt gagcggcgca 120
tggtgcggtc ctcccaaagt cccccaggc aagaacatca cggccaccta tggcaaggac 180
tggtcgagcg ctaaagcgac atggatggc aagccgacgg gtgccgggtc cgatgacaac 240
ggtggcggtc gcgggtacaa ggacgtgaac aagccccct tcaatagcat gggcgcatgc 300
ggcaacatcc ccatcttcaa ggatggctg ggttggtggg cctgcttcga gatcaagtgc 360
gataagcctg tggagtgtc cggcaagccc gtggtggtgc acat 404
```

<210> 1943
 <211> 434
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-G12

<400> 1943

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cacgcgtctg aacaagctgg tggtagcgt ctactatcc accaccgcg cgctccggtt 60
taattttctc tcgaccggcc agcgcaattc tgtggctcga tcgatcggtc ggtcgtaagg 120
caagtgagca agctatatat atatatagga gattcttcga gcgagctagt agcgagatgg 180
gttccgcggt cctcttttac tgcattcga tcgccgtcgt cgtcgcttg tcgtcgcca 240
tggtcgcggt cggggcgcc gcccggggg aaacccccaa gttcatctcg gggctgtgcc 300
cgggtcggtt cgaccacag cgcgggatta gcgcggtggc cagcagctgc aaggaccgcc 360
cgctgccgtc gccggagcgc tgctgcgggg cgctcaaggc ctacgcgtgc ccctacagcg 420
agctcatcaa cgaa 434
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<210> 1944
 <211> 391

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-047-Q1-E1-G4

 <400> 1944

 cgggtcgacg ctgaccgca tggacgagct gctgcagtcg ggctgcacaa cgtcaaccgt 60
 taccatacac caccgaacga accggcccaa gacacaacgg gccgccagcg gtccggaagc 120
 ccttcaaccg agccgcngcg caatgagcgt cggccagcgc gacggcgggc tgccgcccga 180
 ttccgtggtc gagcggaac ccgacatcct gcgcgacgcg cagcgcctga tcgagaccta 240
 tcacgacgaa ggccgctacg cgatgctgcg cgtggtcgct gcgccgtgct cgccgttttc 300
 ggtgagccgc gaactgatgc gcgacgcggc cgtgctcgcg cgcgagtagc gcgtgtcgcct 360
 gcatacgcac ctggcggaac acgtcaacga c 391

<210> 1945
 <211> 250
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-E9

 <400> 1945

 tcctcaacgc tcggcggcac ctccacctgc aaggacgcct gcaacgacct gccaagacc 60
 atcgacaagg acgacgtcat caacttcagc ctcgacttcg agaaactgca gcgcgtcacg 120
 ctgatctca tcaccgaggc gtccggcacc atgtccgcat gcacgcctcc gccaccctcc 180
 aacgccgga cgcctccta ctgcgcggcc gcgccttcg ggggctccgc cgatgcccc 240
 gccggcgct 250

<210> 1946
 <211> 386
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-D5

 <400> 1946

 ttccggtcc gaccacgca tccatgcgct gcaagcaaca aagttctact ctgtccacc 60

gtccatctag ctctcaagaa ccaacccgta ccagcgctat ccggccggcc atggcggcgg 120
cgcgccggct ctccctgccc ctcgctctgc tggctgctct ggccgtcgcc gggcgcgcg 180
tggcgagga ctacgacttc ttctacctcg tgctgcagtg gccggggggcc tactgcgaca 240
ccaagcatag ctgctgctac cccaagtcgg gcaagccggc agtggacttc gggatccaca 300
gtctctggcc taaccgagac caccgcacgt tcccgagaa ctgcattccc gaccacgcat 360
tcaatccgtc tattgtgagc gatcta 386

<210> 1947
<211> 407
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-047-Q1-E1-E5

<400> 1947
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gcgagccgga gagcctgccc aagtacgagc ccaacaagga gatggacgct aagctccgag 120
aagaatctag aaggaggagc aaccttccga gccaaaggcg cgaggcgat aagggtctgt 180
cgagggggca caagagcatg cggctgcagg acacgaacca gagccacgtg cacgccgagg 240
aatcgctgcc cgttgtggcc gaaaacgggg tgacaatggc ggggaacgac ggcgactcgc 300
ggctgttcgt cgacctggag cccgttccgg ccatacagaa ggggcacggc ggcagcgtcg 360
gcgggcacca cgcgggcgcg tgcgccaggg ctaggacat gttcaac 407

<210> 1948
<211> 377
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-047-Q1-E1-B7

<400> 1948
acaagcctct agaatgagtc gtaatagcgt gcgttcgtgc agccacagac aggcgtccgg 60
gcacatgtc tttcacggc acgcaggaca agtgcacggc gtgcgacaag accgtccact 120
tcatcgacct cctcaaggcc gacggcgcca tctaccataa gacatgcttc aagtgcagcc 180
actgcaaagg ggtcctctcg atgtgcagct actcctccat ggacgggtgtg ctgtactgca 240

agaccactt cgagcagctc ttcaaggaga ccgggagctt ctccaagaac ttcacgccag 300
gtggcaagtc atcagacaag ggtgaactga caagggcccc aagcaagctg tcgtctgcat 360
tttctggtac ccaggat 377

<210> 1949
<211> 375
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-B9

<400> 1949

cgcgtagggtt ccgcgccatc cgatccatct tgggcggggcg ccgcgcgctcg agggccagcc 60
aaagcttgcc atggcgggcg tccggtccga cagggtccac caccaccacc gccgctccga 120
ggcgtagtgt ccggcaacct ccgcgccgtt ggcggcgggcg agggccgatg acgccctgctg 180
ccagcgccccg cgggggctcg tgcagggtccg ggagcgggac caggggccgc tgtcgacggg 240
gcaccagcac ctgcaccacc atcaccacca gctgcgggcg tggcgggcgt tcccaccccg 300
ccgccccggg cggggcgcc gccctcctca gcgctgcgaa agcgacctca acatcagggg 360
gcaccgctcc tgcag 375

<210> 1950
<211> 362
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-C1

<400> 1950

cgggtcgagc acggtcccg ggacgtaaga agtcgtctaa ttcttgatc gaattagacg 60
acttcttcgt cctctcttc attagcacgc taacttgtaa tctgcaggat ctaagcaaag 120
acttgattta gttatggacg gattggtacg cctcttgaaa gttcgctggg tccggggtat 180
caaccttgcc taccgcgacg caagaggcag cgatccgtat gtcgtcctac ggcttggtcaa 240
gaataaactg aagacaagcg taaagaagag atccgtgaaa cccatatggc aagaggagct 300
atctctgaac gtcatagatc ccagccaacc actgaagctg gaagtgttcg acaatggcac 360
ct 362

<210> 1951
 <211> 99
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-D10

<400> 1951

agtcgtatta aagtagacgg cgattgacac gcgtcttcgt cctcgccctac ttccgcaact 60

cggagcttct tcgatttccc atccccgggtg ctgcataact 99

<210> 1952
 <211> 368
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-B6

<400> 1952

cacgcctcta cacagacgtc ctgggatcac cgggtgggtgg cccggccagg cgcggtggcc 60

gggcgggtgc ggcctcctgc cccgacctcg gctcggcgcg cgccaggcgcc tggcagcccc 120

cagcctcggc ctcggccagg cgcgcgcgac cccagcccc ggctcgcggg ctgcgcggtc 180

atggtggctc cgatccgggc tctccggca tgggcaggcg cgggttcccc cggctagcag 240

cctctcctgg tgggcacggc ctgccccggc ggctcaggaa ggcgcggcgg ccccggcgtg 300

cacagccgtg gtccagccat ggcggcgcgg gcacgcagcc tcggctcccc ggcgggcatc 360

catggcgc 368

<210> 1953
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-A2

<400> 1953

cgggtcggtc cacgcgtccg acaacgccga gcgcgacggc cggggccggt acaacttcgc 60

gggctacgcy gagctcatgg agatggcgcy caaggccggg ctcaaggctc aggccgtcat 120

gtccttcac cagtgcggcg gcaacgtcgg cgactccgtc agcatcccgc tgccgcgggtg 180

ggccgcggag gagatggaga aggaccagga cctctgctac accgaccagt ggggccgacg 240
 caactacgag tacgtctcgc tcggtgcga cgccctgccc gtccctcaagg gacgcacgcc 300
 cgtcgagtgc tacaccgact tcatgcgcgc gttccgcgac cacttcgccg actacctcgg 360
 caacaccatc gtggaaatcc aagtcggcat gggccccc 399

<210> 1954
 <211> 373
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-047-Q1-E1-A3
 <400> 1954

aacctctat actaagtcct aataagaacc tttctccctc ctccaccttt ctctttttct 60
 tgccacggca aaacaccttc gccggcgaga gcatggcgat ggcgtaaccgt gtccctggagg 120
 tcacctgggt gtcggcaaata gacctcaaga aagtgtcgct cttctcccg actcgcatct 180
 acgcctgggc ttccatctcc ggattcgacc tccgcatccc tccccacagc acccaagcag 240
 accacagcaa cggctgcaac ccctgctgga acgcctgggt acacttcccc atcccggtcg 300
 ccgctgacac ccgcgccctc gcactccacg tgaggtcccg cgcccagcgt ctatactgg 360
 gcgatcgca cat 373

<210> 1955
 <211> 373
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-047-Q1-E1-A5
 <400> 1955

gacccacgca tccacggacg cgtgggcgga cgcgtggggt cgacgtccag cagatcgaga 60
 gcggcctgggt gcccatgccg gtctacggcg ccggggccgg ggccgggtcg ttcacctgc 120
 agtgggacgg ctgctacggc cccgcggact cgaggcacia cggctaccgc ttcggaagcg 180
 gaggtgcgg gatgcggcac cacggtcgca ccccgagca ggaccggaag aagggcgctgc 240
 cgtggacgga ggaggagcac aggtgttcc tcttaggcct gaagaaatac ggcaaggggg 300
 actggaggaa catatcgcg aactacgtcc ataccgggac gccacgcag gtggccagcc 360

acgcgcagaa gta

373

<210> 1956

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-A6

<400> 1956

tcgcggggccg acccacgcga tccacggacg ctcgggcgaa aatccgacat gtacgtgttc 60

tgctgctcct acgcccacaa cgtcgcgccc aaaggcaagt tcatcgctt cgtctccacc 120

gaggccgaga ccgacaagcc tgagatcgag ctcaagcccc ggatcgacct gcttgggcct 180

gtagaggaga ctttcttcga catctacgac agatatgaac ccgtcaacaa cccggaggag 240

gactgctgtt tcttcacaaa tagctatgac tccaccaccc attttgagac gacgggtcaag 300

gatgtgctcg ccttgtaaaa caagatcact ggaaaggagc ttgatctctc agtcgatttg 360

aacgctgcta gtgctactga gcaagaagct gcttgaacac ccggcggcct cttttttttg 420

cagctc 426

<210> 1957

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-A7

<400> 1957

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gggtaggagg acgagaagag gaatggcggg atggcggcgc cgcggcgag ggcccgggcc 120

gactacgact accttatcaa gctgctcctc attggagaca gcgggtgttg caagagttgc 180

ctcctgttgc ggttctctga tggttccttc actacaagct ttattaccac aattggtatt 240

gactttaaga tacgaccaat agaattggat ggcaaacgta taaagctaca gatttgggat 300

acagcgggct aagaacgctt ccggactatt accaccgct actaccgacg agctatgggc 360

atcttgctgg tttatgatgt caccatgaa tctctctt 399

<210> 1958

<211> 443
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-047-Q1-E1-A9

 <400> 1958

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ctcgcggggtc gatgcacgcc tctagccgca gtgccagcag agcctcgtcg tcgagctggc 60
gctgcagacg cacgcgctgc tgcgcgagct cggcaacccc gcgggcgcgc gcatcgctcct 120
cgaaaccgag cgccgcgcgg cactggaggc cgccccctca gccgccgccg cccgagacgg 180
aggacgcggg gcgtcgcggg ctaataataa gcgcggagtc cgcgcgccgc cgccgcgcgt 240
gctggacgag ccgtcgtgga ccatgttctg caacggcaag aagaccgggt acgcggtgcg 300
aaggcaggcc acggacgacg acctcgctgt gatggagacg ctgcgggcgg tctccatggg 360
cgccggcgtg ctccccggga gggccgcccc ttcgtcggcg cccgacgcgg ctgcngcggc 420
ggcagcggac gacgaggtgc cct 443
  
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<210> 1959
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-B10

 <400> 1959

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ggtcgagaca agcctctaaa atgagtcgta gtaggtgctg gagtcggcgg acctgctcgc 60
gccgcggaag ctggacgcca aggaggagct ggagaagctg aacgaggccc cggcgtcgat 120
gacgtctctt gacttcatgg gctggcactt cgaccaggac gagctgatga agcgcaggga 180
ggacggcacg ctggacgccg acggcgatgc catgctcttc aagaaggcgc ccagcgtggc 240
gccaagaag ttctctacg tcgacagcct ctctccggc ggcatgagga gcccctctgc 300
gcgccactga taataatata tgatcgctgt cgcgccactg aactaacagc agctcagtca 360
tcgtctacga tccaacagca ccatggatcg tcgatcgctc actcacgaga aggagagacg 420
tccattggga 430
  
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<210> 1960
 <211> 438

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-B11

 <400> 1960

 cgggctcgagg caagcgtcta gaataaatca ttataaaatg gaatttttagt gtaaaaaataa 60
 aaggctagaa cttgttttatt tcatagaaaa ttcatatgaa ctccaaatca cttcatttca 120
 gttcctaataa ttttgtaatt ttattctcta tcacttagag tctctgggtt gtcatgaaaa 180
 cagtaataaa atttatttat cacttaattc tatttaaaac acacgaaacc tttgaaaatt 240
 cataacttaa aatctataac tccaaaaaatt atgattcatg ttcctaggat tctattttta 300
 tatgtagatt attactgtgt attttgttta tatgtttcat gtgatgttca ttttgtctat 360
 accatgtttg tctgtattgc tacgttttagc agtgaggaca cgtgtcatct gaagagcaag 420
 ttggtacctg gaatctca 438

<210> 1961
 <211> 355
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-047-Q1-E1-B3

 <400> 1961

 agagagtcgt attataagag cggcaggcag gtccgcgagg agggcacgca gaccgacgat 60
 cgagccgtgc gggggctcgg gacgggaacg ggacaggacc ccaaaatctc agatccttcc 120
 tgcccgcccg cccgtgcccg tcgacgcgtc gttcttgccg gccgcgcctc acctccgccc 180
 gcgcctcctc cagggggatc ggatacgcca caggtgcgc gatggtgctg tgggtcttcg 240
 gctacggctc cctcatctgg aaccccggtc tcgacttcga cgacagaatc ctcggcttca 300
 tcaagggcta caagcgcacc ttagtctcg cttgcattga ccacagaggc acacc 355

<210> 1962
 <211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-G7

 <400> 1962

acaagcctct acagtgcgtc tcatgatggt tactccgcgc gccttctctt tctctcccgg 60
acgtcgatcg tgttcttcag cacgggctag ctagctccct cctcccagc catggcgacg 120
ccggacaaca aggggcacgg gcatccgctg cccaagtttg gggagtggga cgtgaagaat 180
ccggccacgt ccgagggtt caccgtcata ttccagaagg cccgcgacga caagaagacc 240
accaccggcc ctggggctgg gaacgcgcgc gcaggcattc cgccggcctt caggaacggc 300
ggcggcgacg gcggttacag gcccgacttc ggcgacggca accagtacac gccgccccaa 360
cggaagaagt gggccttctg tggctgctga at 392

<210> 1963
<211> 236
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G8

<400> 1963

aagataaagg taatggagtc gtcacgcagg ttccagccgg ccgtcctcct gcttctcctg 60
ctcattgtgt ccaccgatat ggcacaggca agggaatgcg agaagtacag tgagcgattt 120
gttggggcat gcatgatcgc agacaactgc gccaatgtgt gccgcggtga gggcttcttg 180
gccggcaggt gcagcacctt ccgccgccgc tgcattctga ctaggcagtg ctaaac 236

<210> 1964
<211> 374
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-H10

<400> 1964

acaacccact aaactgactc ttactagtaa aagctggagc ttttctgagc gtgtaggtgc 60
gttgggtggaa cttggggccc cagtccccca cccaagatct cacctatctg cactgggctg 120
gccggctggg ccgcgcgcca accaccgtgc ttccgccatt gcgtcgccgc ataaccttgg 180
ctaagcgtga actttgtcac aacaaccacg tttggcgttt ccatgcttgt cctgggttcc 240
tggcaatccc tgtattaatc cgtctgccat tgcattatct tgcactgact gatcttttcc 300
aaccgaagga tgtggtggtc ggtagagcta aaagttaagt tggacccaaa aaaagaaaag 360

aaaaaaaaac aaaa

374

<210> 1965
<211> 415
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-046-Q1-E1-H12

<400> 1965

tgagtcgttt acctaagcag ctaccaacca accctataaa gctagacacc gtacccatgg 60
ctcgcgctag cgtcgtcttt gtcattgctg ctctcctctt cgtcgccatg gtcgtagcac 120
cgatggccga ggcaaagtct gccgatgccc ctgtggctga cgcgccggcc gatggacctt 180
gcgggcccgc tgctgcacct ggccccagg gtgtcgaagg cctgtcaggc aatgaggatg 240
acgatgatga ctccaccaac tgaggccaca catgtcggcc cggttaaatt tggaacaaga 300
catggaagaa aaatgagagc aatgtcttta aaaccatgaa tccataataa tgtgtggtca 360
tccatggata catccttgct ctccctcttt ttctttnggt ttgattttca atgtg 415

<210> 1966
<211> 368
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-H2

<400> 1966

ctctatagaa agtcgtagta gatcccacga actacatgga ggacagcctg gtcgactggg 60
ccaggccctt cttggcgcgc gcgctgtccg aagacaactt cgacgagctg ctcgacccgc 120
ggctggagaa cagggtcgac cggctggagc tggagcggat gtgctcctct gccgcggcgg 180
ccgtccgcca ctacagcaag cggcggccca agatgaaaca gatcgtccgt gctctggaag 240
gggacgcgtc gctggacgac ctgaacgacg gggatgaagc agggcagagc atgatgttca 300
gctccggatc ggagtacgac tccggggcca actacgcggc caacatcagc aagttcagga 360
aggtggcc 368

<210> 1967

<211> 383
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-046-Q1-E1-H3

 <400> 1967

taagcctccc cgaccgccac atctattagg tgcagccatg ggtgcctgtg caacgaatcc 60
 taagaccctt gaggggaaag cccagctga ggccaccatc tccacacca acgttgcacc 120
 tcagaccact accatccaca ttgaggttgc ggcaaaacat gcagtacttg agaaggtgga 180
 ggaggacaag gaggacgcac taacactggc ggcgaaacaa cagccagcag ccaccattga 240
 gcctcagcag attgctantg aggtgaccac ttcggaagtg gcggtcgtcg ttgtcgagcc 300
 tgagaacaca gaggacgacg acattgtgga gaagaccgtc atcgagaacg agaaccatc 360
 agcagtccat gcataggaaa ata 383

<210> 1968
 <211> 414
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-H4

 <400> 1968

gaaccccacc cacagcaaac gactggagat ctactaaacc tggaagcaga ggtgaatcct 60
 tcggctcttg aactcgaaca aagcaatgca ttggcactcg ctattgtagc accaggtgac 120
 tacaagccgc cagcatctca aagtatgttt gatgtcaatt cgtctgggtg ggagctggca 180
 ctggtcaatg ctccaagcac ccatacaagc caagcagttg agaccaactt ggctggaggc 240
 tttgacaagc tgctacttga cagcctctac gaagacgagg ccaggaggca gcagatcgcc 300
 ggcgcgacct acaccggtag cctaggagca gccaacctt tctgcaccaa tgccagcgat 360
 tcggttcaca tgtccagcag atttgcacaa ccggctaatt tgcagttggc actg 414

<210> 1969
 <211> 382
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-H6

<400> 1969

acaagactca agactgactc ggactagccg tgtggagcaa gaactcctgc accaagaagt 60
acgactgcaa gataccttccc aactcgttgg tgatggactt cgtgaacaac ggggaggtgt 120
ccgggggtcac gctgctcaac tccaagttct tccacatgaa catgtaccgg tgcaaggaca 180
tgctgatcaa ggacgtgacc gtgacggcgc ccggggacag cccaacacg gatggcatcc 240
acatgggcga ctcatccggg atcaccatca ccaacaccgt cattggcgtc ggcgacgact 300
gcatctccat cggccccggg acctccaagg tgaacatcac cggcgtgacc tgcggccttg 360
gccacggcat cagcatcgga ag 382

<210> 1970

<211> 383

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-H7

<400> 1970

cacgcctcta cagtgagtcg ttttagagcc ataaagcgtg aagttggagt aattggtgct 60
aggcaaaggc cagctgatag tgcagcaata tacacatcta cttctaattg cttattcaaa 120
gtggtatcag caccaaaggc tagcccatat ttggaatgga agcccatatc agtaagcccc 180
agcactgctg cacctcctgg tgctccatca cctgttgatg atggaagtaa aacagaagtg 240
tctgctttgt ctaagaagct ttcacatgct aatgtatcac atgaacatgt cattataccg 300
gatcacatca ggataccaga ttctgaaaga actcatttca tcttcggttc ttttgaatct 360
gaaatttatc caaatgcttc ttt 383

<210> 1971

<211> 353

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-H9

<400> 1971

gtcgtattat ccgcgacgac atcaacgaac ttccgctcgg atgacgaaga cgtgcagcga 60
catccacatg gcgacgacg ccgtcgccag cggagcggac gttcgccgag caggggcagc 120

accggcatca cgtcatctac cagggagcag cagcagcagc acgacgacgc tggctgcggc 180
ggcagctacc accacgacaa ggactacatc atcatgcaga cgcaggcgag gagcgggctg 240
gcgtgccagc cgacgatctc cgtgatgggc aagggcggac agccgtgacg ctgcctgcgg 300
gcgcatcgca acggtagaca ccacgtgctg agggagatcg ccctgccgtc gca 353

<210> 1972
<211> 436
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-A10

<400> 1972

gggtcgagac acgctgctag aataactata tttaaaacag ttaagaattc atatataaga 60
gtgcatatat atatataatc ctgccaagac aaaggtaatg gagtcgtcac gcatgttcca 120
gccggccatc atcctgcttc tectgtcat tgtgaccacc gatgtggcgc aagcggcgag 180
ggaatgcgag aaggacagcg agcgattcct tggggcatgc atggcgtcgg acaactgcgc 240
caacgtgtgc cgcggtgagg gcttctccgg cggcaggtgc agcaccttcc gccgccgtg 300
catctgcaact aagccgtgct aaattaacct actcccgga gttcgatggg ggacgtttat 360
tctatattatt ggcttacttg attttttccc ccctaacaat aagaaaacgc acgtgctggc 420
atgtacgttg tgttgt 436

<210> 1973
<211> 379
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G5

<400> 1973

ctcgcgggtc gacacacgca tccacagtca cttgggagc cggcgcggca cgcagcctgg 60
aacaccttgg atttgctgtt ccctatcggg cgttaccga ggcacgtgat cagcctgttc 120
ttccggctgc tgtatccgtg gtactggcct tectcttgc ggaacttcgt gatgacctgt 180
gccatgaccg tgtactacta catcctgaac ctgctggtgt cgtgttggga gaacctgacg 240
cggcccagtc accggagaac gcacggtgaa tgaagacgcg gcagcccatc cagtggcacc 300

ttgtgttggtt gttgttggttc atttttctttt cgtttgcgcg agtgggtgtac tagttagtag 360
cagcggctta tgtgttcgt 379

<210> 1974
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-047-Q1-E1-A11

<400> 1974

ccactacact aactcgtact aaaggcctcg tgccttctct tctcctctgg catggaggaa 60
gtagctgttt cgcctatgat gggtgcccgc gtactgctgg acaacaatgg cgccgacgcg 120
gtctcctgca ctgccatccc tagcgtaaca ataagcctag aggagaaaga aaatatcaat 180
ggggatgttc ccacgatcac ctccagccgca agcaacgagg aggaggcgtt gttcagtgtc 240
ggagaatcca tcaaggacga tggccatcgc ttgacgatgg aatgcaccac tcgcgtctcc 300
tccagtagcc cttccactcg caagaagcgc ggggcgttca gcctcatcac ggcgatgttc 360
ctgtccttcg gccggagcga cgacagcatg aagaagacag acgacgacat cacgatcccc 420
aagaaga 427

<210> 1975
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F1

<400> 1975

cgggccgacc cacgcgtcta ccagactcc tgctcgacgg ggcagctgca cgtggccgtg 60
ttcaagccgg cggacgacga gcccatggcc gccacaacc cgcgcggcct ccccggtgtc 120
tccaccggcg aaggcctgaa gaaagggacg cgcgtcgggg agggggcgct gagggaggtc 180
gcggcctaca tctcgcacca cccaccaggg agcgggaccg cggatgatgg gttcgcgggt 240
gtgccgccga ccgcgtcgt ccggtgcacg cacggagcct tcaggcacgg cggagccgga 300
tccggagccg gagcgagggc gccggtgccc aagctggggg ccatgcaggc cttcgttagt 360
aactgcggca gctgcgagga catgggaccc agcg 394

<210> 1976
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F10

<400> 1976

acaagccact agactcactc gtcttagccc tgcggaccgt agagctcctg gagcaagccg 60
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 tgatgctcat gtaccgggac gccagcatcc ccgtgtgcc a gctctcgggtg cagaccgacc 180
 gcgacggcac gtaccactac aacctcggca aggcgctggc gcccctgcgg gaggaaggca 240
 tcctcatcct cggctccggt agcgccacgc acaacctgcg caagattagc ccgtccgacg 300
 cgcccggtgcc gcagtgggcc gccgagttcg acacctggct caaggactcg ctccctcaacg 360
 gaaggtacga ggacgtgaag cgttacgagg agaaggcgcc gcacgcgagg gtggcgcacc 420
 cgtggccgga cca 433

<210> 1977
 <211> 442
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F11

<400> 1977

tcgtcgggtcg acacacgcca ctaaaatgat ccgtccacc tccattgacc aacaattaag 60
 cctccccgac cgccacatct attaggtgca gccatgggtg cctgtgcaac gaagcctaag 120
 acgcttgagg ggaaagcccc agctgaggcc accatctcca caccaaggt tgcacctgag 180
 accactacca tccacattga ggttgccgca aaacatgcag tagttgagaa ggtggaggag 240
 gacaaggagg aggcactaac agtggcgggc aaacaagagc cagcagccac cattgagcct 300
 cagcagattg ctagtgaggt gaccacttcg gaagtggcgg tcgtcgttgt cgagcctgag 360
 aacaaagagg aggaaggagt tgtggagaag accgtcatcg agaaggagaa gccatcagca 420
 gtccatgcag aggaaaaata tg 442

<210> 1978
 <211> 249
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-F4

 <400> 1978

 cgggcccagacc acgcgtccag ccacgcgtcc gcccgacgcg acgattcctc tctccgccc 60
 gttcccaccg atctcacgct ctctctcttc ctccgtcgcg tcggcgtcgc catcgccggc 120
 catggggttgc ggtggctcca aggaggccgt ggccaccggc aacaccagcg ccggcaccaa 180
 ggtcatccgg aggaagtcct cctcggcttc aaccggcgca ggcaacacct caacaacgtc 240
 gccgtcgtc 249

<210> 1979
 <211> 414
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-F5

 <400> 1979

 acacgcctct acacagacgt tctgactacg cgtccggttt tgacagaaac agccgtagat 60
 accagtagat cctgcaaaag cctagcagta gagcttcttg taccctaatt ttcagccacc 120
 acgacgggttt taggtccaat ttgtgaaggt ctcaagaatt cccggatgta tggttttctg 180
 aaagccaatg gcccaaggaa acgttgccac tttatttctc tcgacggagc tttcacgtga 240
 tcatacggct tttgggtagt catctgattg tcttcgtcga acttgttgta cccagaggtc 300
 tgagccctag accctcgatt cattagagaa cccgtgatct ggtcattgtc caagctactt 360
 tgttctgatt gcaggaaatc tttaggtgcc aaaagcaact gtacattttt tttt 414

<210> 1980
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-F6

 <400> 1980

 ctgcggggcc gaccacgcg tcaactggat ctcaagccag gcgctcagtt ccgcgagaag 60

ctgttctctga acatcagcaa gccgttcac acgttccggt cggaccccaa gaagcccgcc 120
gtcgtggtct ggaacgacac tgcggccacg aacggcaagg acggcaagcc ggtgggcacg 180
gtggggagcg ccacgctggc ggtggagtcg gactacttca cggcgtagcg cgtggtgttc 240
cggaacgacg cgccgctggc caagcccggc gccaaagggcg gccaggcggg ggcggtgcgg 300
ctgttcggga ccaagacgca gatctacaac tgcaccatcg acggcggaca ggacacgctg 360
tacgaccaca agggcctgca ctacttcaag ggctgcctca tccggggcag cg 412

<210> 1981
<211> 201
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-F8

<400> 1981

ctcgcggggcc gatacacgca tctaggatga gtacgtacac ctgcaccatc aaagacgagc 60
ggtcagtccc aggtccgggt agacgcccc aacagcagca cttacaatgg atgggatgtg 120
cccgggacaa gctccagtca aagttcaacg aaaccccaac aaacccaaac caaccctcca 180
atcctgaatc cacaaggagc a 201

<210> 1982
<211> 386
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-046-Q1-E1-F9

<400> 1982

gcaagcgatc gtcggagcag agagagactt cctcgccctcc atcccatccc gccgcgcgcg 60
tctctacggt cgctaataag ccgccgcac cagggatgga gatgaagaag atcgccctgcg 120
ccgtcctcgt cgccgcctcg gccaccgtgg cgtcgccgcg ggaggcgccg gctccgtccc 180
ccaccagcgg ctctcccgcg gtcgcacccg ccatcgctcg ggccgcgcgtg gcctccttet 240
tcgcgtacta cattcactga gccgccggac gaggagccgg actgccggag ggaagagaac 300
aagggggggga gagacttggc tgcgctgcgc tgctctgctg ctncgcgcga ttcccgatgc 360

gtgggtgggt gtgctctgat tgggca 386

<210> 1983
<211> 393
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G1

<400> 1983

gggtcgaccc aagcctctac acagactcct gataggcaac acggacgcgg cggaactctt 60
ggcggagcac ggcggtgcagt cggcgcgcg ccatcagcccc ggcgggcgcg gcggggcgcg 120
caacaagcag gcgcgcgagc tgaagcagca ggtgagcgac atcaagcacg aggtgcactc 180
gcagctggag cagacgcggc agacgcgcgt gcgcatgcag ggcatcgcca agcgcatcaa 240
caagctgcac gaggaagggc tcaacaacgc catcaactcc acgacgggtg tggccgtgct 300
gatcgccacg gtggcggttcg cggccatctt cacggtgccc ggggagtagc tgcaggaccc 360
gggcagcctg gcgcccgggc acgatctggg cga 393

<210> 1984
<211> 422
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-046-Q1-E1-G10

<400> 1984

atctgagtac gtactaatcc ttacagatac agagcagctg tactgatgga cgagggcaag 60
gaggaggagg cgatcgcgga gctgtcagga gccatagctt tcaagccgga cctccagctg 120
ctccacctcc gcgcggcgtt cttcgactcc atgggcgagc gcgagagcgc cctgcgggac 180
tgcgaggccg cgctctgcct ggacccgacc cacgccgaca cattggagct gtacagcaaa 240
gcctccacca ccaaggccga accccagagc taggcagcca gccggccggc aggccgccgc 300
tctcctcgtc gtcgattcag ctgcggtttt tgcgaggcan gatgatgaga cgatctcttc 360
tctactctca tgggggtgga gctgcagatc agtgaggcan gagcaccgga acatgcacat 420
at 422

<210> 1985
 <211> 444
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G11

<400> 1985

tcgccggtcg acacacgcct ccaaaccaac tccatccatg cgcctctcgc tctcgctggt 60
 ggtgctcctc ctctccacc tgetcccggg gcgggcggcc tccttttcca cctcctgctg 120
 gtgccagggc cgggagggcg tcgcggaggt ggcgcgcatg gggctcgccg gggacgggtc 180
 ggcggacacc gccacctca gtaataatga aaatgggcgg ttcatttatg gagttgcgag 240
 ttctcctggt aaaagagcat cgatggagga cttctatgag gcaagaatag acgacgttga 300
 tggagagaaa attggaatgt tcggtgtata tgatggatcat ggaggagtcc gagcagctga 360
 gtatgttaag cagcaccttt tcagcaatth aatcaaacac ccaaagttca tcttgatac 420
 caaggctgct atcgccgaaa ctta 444

<210> 1986
 <211> 403
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-G2

<400> 1986

gggccgaccc acgctcttac ccacacgtcc gctaacgct cgggtccggg gacgacatth 60
 ggccgcatca accacacagc acaggcacag cgcagcacca tgacgatgga gggggcggth 120
 tccgacaaca ccaagggcct ggcgctcgcc gtcgctcca gcgccttcat cggcgccagc 180
 ttcactctca agaagatcgg cctcctgcga gcagccaagt gcggcgaccg cgcacgtggc 240
 ggaggacaca cttacctctc cgagcctcta tgggtgggcgg gaatgaccac aatgctgctt 300
 gatgaggtcg caaacttcat tgcttacata tttgcgccgg ctgtactcgt gactccactt 360
 ggggcgttaa gcataatcgt aagttcagtg ttggcgcact ttg 403

<210> 1987
 <211> 374
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D2

<400> 1987

tgcgagagatc cgccgattcc gatgcatctg cgtatttcga caaggaagag cagaaatccg 60
gcgattctga cgccgccacg tctgttgaga agcagaagaa gcagaagaag gagaaatccg 120
gtgattatatt cgacaaggaa aaggaggaga accccgagga ggacgctgcg cccgtcgacg 180
tctccgcgga cggcgtgtat gtgcctccca aggaggagaa atccggcgaa gacgccacgc 240
cggtcgacgt ctccaccacc accggcaa atcgatatctt tttttccaag gcaaaccggca 300
agcccacggg aggtcagccc gcagagagct ccaccaccgc caccgccacc gcggatgcgt 360
acgcgtctca aagc 374

<210> 1988

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D6

<400> 1988

ctcgcggggtc gacacacgca tctaaagcga ttctgaacag ctccgctagc taaagcaggg 60
caaggcggcc ggaaggcagg aaatccgtac gcacgccgag gtcgaggtcg aggtctcagc 120
agggaggatg gaaacggagc agcagggcgt ggttgcgggg gtgaagccga cgctggccaa 180
ggggacgccg tcggcgctgt tccggctccg caacgggagc ctaaaccgcg tgcgcctccg 240
ccgcgtgttc gacctgttcg accgcaacgg ggacggcgag atcacggtgg acgagctggc 300
gcaggcgctg gacgcgctgg gcctcgacgc ggaccgccc gggctggccg ccaccgttgg 360
cacctacgtg cccgacggcg ccgcgggcct ccgc 394

<210> 1989

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D7

<400> 1989

acaagcctct attctgagtc gtgtcacgga gccacgggag cggaggcggg cgggccggcg 60

ggcggccatg gacgtggact gcgtctcgct gcccgacgcc ccggcgggcg acgtggatgg 120
 cggcgccgcc cggccgtggc ccaaggccgt gaccaacggc ggcgtccacg agctgctgga 180
 gtgccccgtg tgcaccaact ccatgttccc gccgatccac cagtgccccca atggacacac 240
 gctgtgttcc acatgcaagg ccagagtaca caaccgttgc cctacctgca ggcaagagct 300
 gggcgacatc aggtgcctgg cgctggagaa agtcgccgag tcgctggagc tccccctgcag 360
 gtactactcg ctgggggtgcc ccgagatcat gccttactac agcaagata 409

<210> 1990

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D8

<400> 1990

acaagcctca agtatgagtc ttataaata aacagggttc catggtctct ctcaactcaa 60
 gaacagtgat ttgaaataat tgggaataaa tagttcgtga atccctgaag cgtgcatata 120
 tatattcctg ccaagataaa ggtaatggag tcgtcacgca ggttccagcc ggccgtcatc 180
 ctgctttctc tgctcattgt gtccaccgat atggcacagg caagggaatg cgagaagtac 240
 agtgagcgat ttgttggggc atgcatgac gcagacaact gcgccaatgt gtgccgcggt 300
 gagggcttct tggccggcag gtgcagcacc ttccgccgcc gctgcatctg cactaggcag 360
 tgctaaacaa gatcgctcga tcgcttgcca tgcacgcaca 400

<210> 1991

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D9

<400> 1991

gattcgccac agctcgttat cctcctcttg cattgcattg caggtcgtag ttgagcagca 60
 gcaaccactg cacaggatgt cgtggcagac gtacgtcgat gagcacctca tgtgcgagat 120
 cgagggccac cacctgagct ctgccgccat agtcggccac gacggcgccg tttgggcccc 180
 gagcaccgca ttcccacagt tcaagccaga ggagatgacc aacatcatta aggacttcga 240

cgagcctggg tttctggccc cgatcggcct ctcccttggc cccaccaagt acatggtcac 300
ccaaggcgag cccggcgctg tcatccgcgg gaagaaggga tctggaggca taactgtgaa 360
gaagaccgga caggcgctgg tgatcggcat ctacgacgag cccatgaccc ct 412

<210> 1992
<211> 404
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-E1
<400> 1992

aagactctac acagagtcgc actatttctc ctccccctt caggctcccc gatccgacga 60
ccccagcggc ggcgatgggc ggcaaggacc tgacagagga gcagatcgcc tcgatgcggg 120
aggccttcac gctgttcgac acggacgggg acggccgcat cgctcccacg gagctgggag 180
tcctcatgag ctccctcggc gggaacccaa cccaggcgca gctccgggac atcgccgcgc 240
aggagaagct cacggcgccc ttcgacttcg cacgcttccct cggcctcatg cgcgcccacc 300
tcaggccccga tcccttcgac cgcccgtcc ggcagcctt ccggtcctc gacaaggacg 360
gctccggcac cgtcgccgtc gccgacctcc gccacgtcct cagc 404

<210> 1993
<211> 302
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-E2
<400> 1993

acgcgtctac ggagactcgc gcgatgacgg ggctgtacga catgctcaag actacgtggg 60
cccgaggagaa cggcagcgtc ggcacggagc agcgcaagat cctggtcggc cccatccccg 120
gcggcgctcag cccgtccgtc agcgacgggg acgacctcgc cacggtcagg atgcaggccg 180
acggcatcct ctccctcggc gagaacccga actacgccc cctccgggac atcacgcgcg 240
aggagacgct cagagagcgc ttcgacatcc cacgcgtccc ggctcatgc acgtccacct 300
ca 302

<210> 1994
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-E8

 <400> 1994

 acacacgcgt ctaccacac gtctgcccac gcgtccgaac caaccctaga aagctagaca 60
 ccgtacccat ggctcgcgct agcgtcgtct ttgtcattgc cgctctcctc ttcgtcgcca 120
 tggctcgtagc accgatggcc gagggcaaagt ccgccgatgc ccctgtggct gacgcgccag 180
 ccgatggacc tagcggggccg gctgctgcac ctggccccc ggtgtgcgaa ggccgtgcag 240
 gcaatgagga tgacgatgat gactccacca attgaggcca cacacgtcgg cccgggttaa 300
 tttggaacaa gacatggaag aaaaatgaga gcaatgtctt taaaaccatg ataatgtgtg 360
 gtcateccact catccatgga tacatccttg ctctccctct ttttccttcc ggtttgaatt 420
 t 421

<210> 1995
 <211> 408
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-D10

 <400> 1995

 tctggtcgaa aatttcgagg ctaaggctgc ggatttcgga cttgccaagc tgaccacaga 60
 caccaacacg cacgtctcca cgcgtgtcat gggaactttc gggtatttgg ccccgagta 120
 cgcgtcgagc ggcaagctca ccgacaagtc ggacgtgttc tccttcggcg tcatgtcct 180
 ggagctcatc accggcagga gaccggttga tcccacgaac tacatggagg acagcctggt 240
 cgactgggcc agaccctct tggcgcgcgc gctgtccgaa gacaacttcg acgagctgct 300
 cgacccgcgg ctggagaaca gggtcgaccg gctggagctg gagcggatgt gtcctctgc 360
 cgcggcggcc gtccgccact cagccaagcg gcggcccaag atgaaaca 408

<210> 1996
 <211> 385
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B4

<400> 1996

tgggatccct cgctaataac atcatggteg tgggcgccgt ccttgccggcg ctcgtcgccg 60
gcgggtcgtg cgggcccccg aaggtgccac ccggcccaa catcaccacc aactacaacg 120
gcaagtggct caccgctagg gccacctggg acggtcagcc caacgggtgcc ggcgctcctg 180
acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcatgacgg 240
cgtgcggcaa cgtccccatc ttcaaggacg gcaagggtcg cggctcatgc tacgaagtga 300
gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgtacatc actgacatga 360
actacgagcc tatcgctccc taaca 385

<210> 1997

<211> 133

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B6

<400> 1997

tacaacactc tatagtgaag tcgtattaac gcgtccggtt ttctgccggt ctgtcggcag 60
ccgctttctc ctattcatca agactgtaat gtctattgtt gctacctaat gcttctcact 120
tgtcattttg gac 133

<210> 1998

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B7

<400> 1998

tcgcggggccg atacacgcct ctatacgtcg tcgtagcacc tcgtggacgg tatgcgcccg 60
ctccgcctcc gcgggcagct ggagtactac ccgccgccac cgcgcgccacc gccgctgggc 120
cacgccgatg tgtaccatga cgtgacctc ccgccgccgt cgcaggcacg gttcggcttc 180
gagatcaagg aggtgggcat gaccagccgc tacgcgtccg ctgaggatct gcaccagatg 240
gacagcgacc aggaagaggg tgctgagggt ggcgatgacg gtgacagcag ttgccacac 300

gccatcgaca tgcaggcgga ggagttcatc accaagttct atgagcagtt caagtcagaa 360
tcgttcaacg gccgtgcctc cgagtgat 388

<210> 1999
<211> 415
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-046-Q1-E1-B8

<400> 1999

acaacactct atagtgatgt cgtattataa gtgcatgaat ccaaattata ccgagtttaa 60
attcccgcaa atcaaagctc acccatggca taagatattc cataaaagga tgcctgctga 120
agcggtagat ctctgttcca ggcttctgca gtactcacca aaacttcggt cgactgcttt 180
ggaagcattg gtccatccgt tctttgatga acttcgggat ccaaacaccc gcttaccgaa 240
tggtcgtttt cttccgcctc tcttcaattt taagcccat gagctgaaga acgtgccggc 300
ggatttcattg gtgaaattgg tcnctgagca tgcacggaag caatgtgcct tcgtagggtg 360
gtgatctctg gataagagga tgacgactcg atgattagct gaggaccaag ttaat 415

<210> 2000
<211> 439
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B9

<400> 2000

atacaacca ctagaatgag tcgaacaacg gccgcgctct tggtgctagc cctcgcgcta 60
gtggcggcca ccgccccaca ggtagcggag gcaaagaaga agagagcggc ggagagcggc 120
gaggcggcgg aggcgaagaa gatccaggac gacttctgct cgacgctgtg cgagggcaag 180
aaggggacgg acctggctgt gtgcaaggag tcctgcgcgc tctcccagca gtccaacctg 240
gtgctgtacg gcaggatcca gtgcaagggc aagtgcaccg agcagaaggc catcacggcg 300
ccggccatga aggtctgcca ggaggagtgc gacaaggcgt acgtggtgaa ggcgcccgag 360
gtcaccaagg cctgcagcgt cacctgcgcc aaggagaaga acccgcgctt cagcgagaac 420

tgcaagaggt cctgcaccc

439

<210> 2001

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C1

<400> 2001

gggtcggacc acgcgtctac taactatcag tgcattgtgt catccgtgca cgccggcaat 60

gggtgtcctcc gcccggtgctg tcatcggtcct cctcgctgccc gccggcctccc tcgccgtgct 120

gctctcggat ggccggcgga tggcggtgccc ggtgtacggg tacgcggcgg ggagccccaa 180

cgggccggag aactggggga agctgagccc cgcgtagaac ctgtgcgggg aggggaagca 240

gcagtcgccc atcgacatcg tcaccaagca ggccgtcccc gccgccaccc tcgacaccct 300

caaccgcacc tacggcgcca ccaacgccac gtcattcaac gacggccacg acattacgct 360

ggcgctccaa ggcaatgttg ggaccgtga 389

<210> 2002

<211> 113

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-046-Q1-E1-C10

<400> 2002

tgagtcgtat taaaccggna cggatgcttc tacgtgccg ttcacctctc togtttgatc 60

ggcgcttcgg ctccgggactg gcgcttctga ccgagtgatc tgggatggca ttt 113

<210> 2003

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C11

<400> 2003

tacaactcac tagagtgagt cgtagtagat ccattctgct aataagcctg cgtgcccttc 60

gttcttcctc gtctcgatcc cgacgacgct ccgttcggct ccggcaaacc acattcaagtc 120

gcgatggaga tgaagaaggt cgctcgccc gtcctcgccg ccgcccctc cgccaccgtg 180
gtcctcgccg ccgaggcccc ggcgcccgcc cccaccagcg cctcctcggc cgcgttcccc 240
gccgtcgggc cgtgctggg cgctccgtg ctctccttct tcgcctacta cctgcagtaa 300
aattaaagga ggatcgagg gagaggtgc tggctgccat tgcctgtatt cggttggatt 360
ccgtttatat atatatttaa gtactttaat ttgggtctga acatgtcgat tgatccattc 420
atattatttg 430

<210> 2004
<211> 414
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-C2
<400> 2004

gtgggtcgac ccaagcctct acacagactc gtgctaacgc gtccgggcaa ggatgtcgga 60
cgcgaagcta ggaccaggct gccggagtcg ccctgatcta gcttctcagg aactccgaat 120
gccctggatc ctageccaatc atcctccttc ccctttgaat ggttgctagc ttctcaagaa 180
ctccgaatgc tctggatcct agccaatcgt cctccttccc ctttgaatgg ttgctagctt 240
ctaaggaact tcccattaat aaattgatga ttattttgtc attggtgata agtcacagga 300
aactaaccaa aacagaaaca actgattttc ccctaatttt gtgtttcatg cacagttttt 360
taaatctacg gtggatgttt cctggtaaaa gtattgtgtt ccttgacaat aatg 414

<210> 2005
<211> 391
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-C5
<400> 2005

acaagcctct agtgtgagtc gtactcatcg cgtcgggtccc gcgatgggcc tgttctcatc 60
ggccgctaag agatgtagaa agtgcaagaa gttcctccgc agcgcgggcg cgtgctgctg 120
ctcgccgtcg gcctcctccg ccctgctgg tgggtgtgcgc ggcaacgaag aggcgtcgac 180
gtcggcgctg gcttccgcgc cagatggcaa gaaaaagaag aggtggagga agagaaagtt 240

ctggagaaaag aagaagaagg ccaagaagga gagcgacgat ggcagcggcg agctcgtgga 300
tctcgtcaac agcttctcgg ccaagtccga cgtgtgcaag aacgtgaatg cggccgagga 360
gattctacgg ggctgcaacc agaacatgcc c 391

<210> 2006
<211> 381
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-C6
<400> 2006

tacaagcctc tagactgagt ctctcgtagac aataatggcg cctctcctgg cgtcgtatgct 60
gctcgtcggg ctcgccgtgg gctccgagga ggaggaggac ggcggcggca aaaagaagcc 120
ccacgtcaac cacggcaagt ttaaggcgga gccgtggacg gacgggcacg cgacgtacta 180
cggcgggcgcg gacgggttaa ctgacaccac ggacggcggc gctgcggtct acaagggcga 240
gctggggaaa gactacggca ccctgacggc ggccgtgggc ccgtcgtgtgt acaccaacgg 300
caccgggtgc ggcggtgtct atgagctcaa gggccccaag ggcaccgtgg tggtgacggc 360
caccaacgag gccccgccgc c 381

<210> 2007
<211> 394
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-C7
<400> 2007

tacacgcctc aacacagatt cggaaaaact gtttcaaact tgtgacataa tgatttaggg 60
agatagctca caccttttac accatgccaa cctttaacag tactttgcat atacattttt 120
taatttgcca acccgacgct aattaaatct gtccacaaca atgtgacctg ggacgacatt 180
agatcgagca acaagggtcaa ttgatctagt ttactcggga cagcactaat tcacgcccac 240
cgcaaccact tgtacgggta ttatgtatgg aagaagagcg tgaataaaac actgacgagg 300
atcagctcga gtgcttcact gaacaagcca ctacttgagc ccagtgcctg agccttgtct 360
tcacaagcag agggttatct cctgggttgc aaat 394

<210> 2008
 <211> 374
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C8

<400> 2008

atacacgcct caacaccgag ccatgacaat gacaatagcc gccgtgctct gcctgctcct 60
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 cggcggggttg gaggccggtg gcgaggcggc cggcggcggc tactccaccc cgagcgaggc 180
 agcgccatcc acgcctgccg ctggggagac gacgaccctt tcgtcaggcg gcggttactc 240
 cacccttagc gaggcagcgc catccacgcc tgccgctgag gagacgacga cgactccttc 300
 gtcaggcggc gggggttacg gcggtgcaac cggcaaggct tcctcaagcg gcggcgggct 360
 ggaccccgac ggcg 374

<210> 2009
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-C9

<400> 2009

ggccgacaca cgccaccaa gaaaggcgcc tgagaacaag acggatgctg ctaattgacg 60
 ttccagctcg tttgtttgtt cgtcccttcg gtttggcact gatgcttatg acccattggt 120
 ctgccattgc aattgaaatg tggttggaac gtgcttgatc gggaactaac atgaaatgag 180
 tgaagggtag atgctgatct gaaaaaatatg tgtgttcccc cctctttcct tccatgtcgt 240
 gttgttgtag gtaaccgtca caatatatat aggtggcccc ctttggaatc cggggattat 300
 tccgtttgct gtattttttt ctgtgaaaat gaactgattc ctgtcaattt tctatatgat 360
 ttatgattca tctgaaattc ctgagaccga tgttgaat 398

<210> 2010
 <211> 282
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-B3

<400> 2010

ctctccgcgc cggcggagac tgcgaaggcc aaccactccc agccgccgaa taactcgggtg 60
gaagagcgac ggattcagat tgctcgtttt aatgccctga agcagcggca gctcctcaag 120
caccggcggg atcgggagct cgccgtcgcc acggcggcgg cgtggggcac cagtgttgct 180
gggtctcatc gtgccgtgc cgccgccgcc ggcggttacg gtgcgccggc gccggcgccc 240
gcgccacgtg tcttgagctc gtacgcgtgg cccccgtac ag 282

<210> 2011

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-D1

<400> 2011

caagcctcta tatagagtct tattatTTTT tttggagcaa gcaagcagat aaaataatga 60
aatactcgtc acatatgcca tggctggcat atcaagcggc gcaggtgaaa caaagtcttt 120
gtggtagcat acagcatgct acgcacgaag gtactactac ataccgcata acttgagcga 180
atacaacaag caaacatag gcaagccccg gaatgaaagg aaacaagggt acaaagtgtg 240
cgccccaaac cacccttact cgtcttggat ggctctctcg tctcatatt ccgcctctc 300
atcagcagtg gcatcctggc actgctggta ctcgacacc agatcgttca tgttgcctc 360
agcttcgggtg aactccatct catccatgcc ctacagcagtg tatcaatgca agaaaacctt 420
tc 422

<210> 2012

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-H7

<400> 2012

cgcgggctga cacacgcgtc aagccgcact ccctctacgc ctcaaggctc tcctctcgga 60
ggctctgatag gcaacccaat aatggcagaa gtcctatcag gatctcatga acaccgtcta 120

agctctgcct tagatggaca ctacgacgag aagaggaaat ccaatgtgga atacacagag 180
gacgagaaga aagccgtgat cgcggtctg aaaaagaagg ctttgagcgc ctacacagaag 240
tttaggcatt ccatgaagag ggggaggaag agcagcaagg tgatgtccat ctogattctg 300
gatgagcgtg aacctgagga ggtgcaggct gtggatgcct tccgccagct tcttgtactt 360
gaagagctgc taccatcgca gcatgatgac gtacacatga tgcaaagatt tctcaaggca 420
agaaagtttg at 432

<210> 2013
<211> 294
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-H9

<400> 2013
cgtattaaat ctgcacctct agcactcgac tggggatcta ctaaacctgc aagcagacgt 60
gaatccttcg gatctggtac tcgaataatg cagtgcattg ggactcgatg ttgtagcagc 120
agttgaccac aagccgcgag catctcacag tatgtttgat gtcaattcgt caggggtggga 180
gctggcactg ggcactgctc caagcactca aattatccag gcagttgaga caagattggc 240
tggaggcttt gacgagctgc taattaacag gatctacaaa gactaggcca gtag 294

<210> 2014
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A10

<400> 2014
tacaacactc tagagtgagt catgctaatac acatggttgg gaagctggca ttagtctccc 60
ggagttagct tagctgtggg gtagtgccga gaattgtctt ggaagcactt cctgctgttt 120
ttactattcg aaaagaagca aaaggcaaaa gctatcgata taatagttag tgaatgcagt 180
taatagggat aagggctatg acggtattgt gctcgagtcc tgggtcaagat gggctattta 240
tggtgtgctg gatgaccaag agctacgtta catggcactt gaatttgta agcagctggg 300
agaggttttg cattcagtca attccaaaat caagtagcca ccatttgga ttaatttatg 360

ttattccagc tccaagaatg caaaagctca ataataagga ctttggaccc aaagatctca 420
 tgcattctggc t 431

<210> 2015
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A11

<400> 2015

gttacaactc actagactga gtcgtattac aggaggcgag ggtgcaaggt ggcgccggag 60
 cccaaggagc tggaggaggg gaccgccgag ctcccgtaga tgcccggttc gccgagcttc 120
 aggtactact gccagaagaa gacggcgagg gtcgatagga tcgtgggtga tgccatcgac 180
 gccgatgaca ccgtcaggat cagagcgacg gcgcgacagc tgagcaatag gagcgaaatc 240
 acggcaaaca aggcacagga ctccaacgag gtctctcaac ctaaaggggg gaccaaattg 300
 cttaggttca gtggcttgct gatcgctgct gccgcttggc acaagcaciaa cttgttcagc 360
 cgccaaagaa gcaagccttc gccgcctcct gctgccgctt cagatgcaag ctcccaaacc 420
 tgattaggca gcgctatat 439

<210> 2016
 <211> 241
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A2

<400> 2016

tccagcttta agaagctgcc gctgttctt gtcacatgat gaatcaacgg gatggttctt 60
 gtggatattt ctgcttaacg tggcattagt ggtggatatg aatcttactc catggttgat 120
 ggggatgaaa ctctcatatg gagtctgcag actgcaagta atgagggtga gcatttgatg 180
 gttgatgttc ccaggaagca gggccagcgt tgccagtttt tttggcacga aagagtaaatt 240
 g 241

<210> 2017
 <211> 357

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A3

<400> 2017

cggtcgcccc gaaaaccaac cgtctccgtt ccgttcacct tgcaagcata tccacggcga 60
 tggaggcgaa agcggccatg acctggtact gcggctccct tctggccgtg gccatcgcg 120
 tgttctctgtc cgtgtccctc ggcggtgcgcg ccgccggcgc cggcgccggc gttgacatca 180
 aggtgtcgtg tgcagcgacg ccggacccgg acgtgtgcct gcgcgcgctc caggcggaca 240
 gcgactccaa gaccccgcg gacctggcgg aggcggcgct ccgcgcggcg acgaccgcgg 300
 gcggcgcggc cggcgactac gcccggcacg agatggacgt ggttaaggac aacgaca 357

<210> 2018
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A4

<400> 2018

gaccacgcc tctagcgaga gtcctgttat catcggccgc taagagatgt agaaagtga 60
 agaagttcct ccgcagcgcg ggcgctgct gctgctcgcc gtcggcctcc tccgcccctg 120
 ctggtggtgt gcgcggcaac gaagaggcgt cgacgtcggc gctggcttcc gcgccagatg 180
 gcaagaaaaa gaagaggtgg aggaagagaa agttctggag aaagaagaag aaggccaaga 240
 aggagagcga cgatggcagc ggcgagctcg tggatctcgt caacagcttc tcggccaagt 300
 ccgacgtgtg caagaacgtg aatgcggccg aggagatcct acggggctgc aaccagaaca 360
 tgcccagcag ggcgctgacg ttcagccagc tgggcgccgc gaacg 405

<210> 2019
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A5

<400> 2019

gccggccgat gcacgaatct acagtgacgt cgtactatcg cgtccgcgga cgcgtgggtt 60

ccagaccaac ctggtgccct accctaggat ccacttcattg ctttcgtcct acgctccagt 120
cattttctgct gagaaggcct accacgagca gctgtccgtg gccgaaatca ccaacagcgc 180
cttcgagcca tcttccatga tggccaagtg cgacccccgc catggcaagt acatggcatg 240
ctgcctcatg tacctggtg atgtggttcc caaggacgtg aacgctgctg tggccacaat 300
caagaccaag cgcaccatcc agttcgtgga ctggtgcccg actggcttca agtgccgaat 360
caactaccag cctcccaacg tcgtccccgg gcggtgac 398

<210> 2020
<211> 362
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-A6
<400> 2020

acaagcaact agaataaggc catgtacgtg gtggacccca gcggcaaggg cgactacacc 60
aacatcacccg cggcgctgga ggatatcccg gtgagcaaca ccaagcgcgt gatcctggat 120
ctcaagccccg gcgctcagtt ccgcgagaag ctgttctga acatcagcaa gccgttcac 180
acgttccggt cggaccccaa gaagcccgcc gtcgtggtct ggaacgacac tgcggccacg 240
aacggcaagg acggcaagcc ggtgggcacg gtggggagcg ccacgctggc ggtggagtcg 300
gactacttca cggcgtagcg cgtggtgttc cggaacgacg cgccgctggc caagccccggc 360
gc 362

<210> 2021
<211> 364
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-046-Q1-E1-A7
<400> 2021

tcaagactga gtcgtatcac cctcgtggcg ttgttgtctg ccggcctctt cccgcaggcg 60
ttagggaacg gcaagggcaa ggtgcatggc ggcggtgccg tcaaccgct ggttgccggc 120
atctgctctc gcgccccatt cccagaggtt tgcacggcca cagccgggcg ccatgcatcc 180
aagtaccggc tcatcgacaa tttggccgtg ctgaacatgc acgtggccgc gttcgccaag 240

gcacacagcgc aggcgcggaa gcacgtcgcg gtggggggccc gcactattcc accgccgcag 300
gcacaggccc tcaggacctg cgacacgatg tacatgaaca cgcaggacgc catcggcgcg 360
gcgc 364

<210> 2022
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-046-Q1-E1-A8

<400> 2022

acaagcctct agactgagtc ctctactcg cggcgggtgt cctccctct tcgtcccca 60
gcgacgcagg caggcgcgcg cgcggccatg aaggggggcg gtgccatgag gccgtcgcct 120
atgttctacg tccacgaggc ggacgtcgtc cagatccacc acttcctcga ggagtgtctc 180
ctctgcgcca aatcgtctct cggcgacatc ttcattgtaca ggggtgacac gccgttctgc 240
agcgaggagt gcagggagca gcagatcgag gtggacaggg cgaagcaccg gcggaagaag 300
cgcgcgggcg cgacgcgct gtccgcacgc agcaggagc accggcacca gcagcagctg 360
cagcagcacc accaccagca gcagcaaccg cagc 394

<210> 2023
<211> 248
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clóne ID: LIB148-046-Q1-E1-B10

<400> 2023

agtcgtatta aacncgcgca cttggcgctg gccctcgata tcggggagtg catgtcgttc 60
ctcgtcaccg ccgaccagaa gcccggcgac gacgtgctgg ggggtgtccac cctgttcac 120
aaggctgtga acagcatcag ggccgtgatc tgctacgggg gctccgacac cgcgccgctg 180
gccaacgtgg cggccagtcg catcgggtgg gcgtcgtcca tgcaagcact gcaggtcctt 240
ccgttgga 248

<210> 2024

<211> 210
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-046-Q1-E1-B12

 <400> 2024

 ttgcaactcc ctgacgtgag tcgtattaaa aaaaaaaaaa aaaaaaaaaa aaaaaaagaa 60
 agaaaaaaga aagagcaaaa aaaaaaaagt aaacaagaca gaaacgggga aggcacatct 120
 aaagggtgc tagagggtca actcacttga ggtccgtcgg ccgtcttctt ttaagggaga 180
 gtccctggaat tccctgacgt aagcgaattg 210

<210> 2025
 <211> 450
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-H6

 <400> 2025

 attcgccggc cgaccacgc gtccaccac gcgtccgaaa gaaacaagcg cccacgaaca 60
 actacctgc caccaacaat ggctccagg tcctccattg tactcgccac ggtgatgttg 120
 gctgcgctgt tcgcggttg tttctgcacc accccgctca ccttccaggt cggcaaggga 180
 tccaagcctg gccacctgat cctcaccccc aacgttgcca ccatatccga tgtggagatc 240
 aaagagcacg gtggtgatga cttctccttt acgctcaagg agggcccgac tggcacgtgg 300
 acgctcgaca ccaaggcccc actcaagtac cccctttgca tccgctttgc tgtcaagtct 360
 ggcggctacc gcacgcgga cgacgtcatc cccgcccatt tcaaggctgg caccacctat 420
 aagaccacac tcagcatcta atcaacctct 450

<210> 2026
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-G10

 <400> 2026

 tcgtattaaa agtctccgac gcggcgtctg cggtgccgcc gctgcctcct ggtgtcgaga 60

ccgccagcag caacggtgcc cgcggcgcca gcgtaggacgt ggaggataag cagcggcggc 120
acgacgacga ctgccacccc gaagtcgttc ccgataagat catacgggag gacgcaccgc 180
cagttgttgc agataccgct gccgccccca acatcacgga cgtggagggtg gagtccccca 240
agaaaggagc ggcgccggtg ccaaagccca tcatcggtgt cgcgcagtg gaagacgtgg 300
tggcggacaa gttcgtggct gtggtgaagg aggcgatcaa gaagccgat atggacgaga 360
acgaagtggc gatgcggaga ttcttgggca g 391

<210> 2027
<211> 431
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-045-Q1-E1-G11

<400> 2027
caagcctctg acatgagtcg tcctaagcct ccgtttgcgg tgcgacagct cctccaggac 60
cggccccgcg gcgcgtgccg tacgtgccag ggacgacgcc gggcggccga tggagtccac 120
gtcgtcctac ttccacgcct tcggcaaccc cgacctcgcg gcggtggtct ccggcgacgg 180
cggcagcgcg caggcccacc ggccgcgccg ctccaccgac ggcgcggaagg cggaggacgg 240
caggagcccc accaccacaa cggcgaggcg cgcgcgctcc atgttctgcg tccccgacac 300
ggaggcggag gagcccaacg gtttcttga cgagtgcacc ctctgccgca aggcgctctg 360
cggcgacatc ttcatgtaca gaggggacac gccattctgc agcgacgatt gcaggaggga 420
gcagatcgac a 431

<210> 2028
<211> 391
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-045-Q1-E1-G12

<400> 2028
aagtgactca tactaaggng attcngtata tatttttcgga tccttgagca gactggacga 60
aaatcttggc atttccagaa tcagacttgc ttctggtgac gccagagatt gtcaagaaga 120
catactgttt gaagatcagg caagagctga tgcacgcct tccagctgtg acgagtcgag 180

tggtgtagca agccttaaaa ttcagatttc tctgttgaat ataagactga gggcacttga 240
 agaggatcag gagttcctca atcaggtatt gagttcgctc caatgtggta ctgatgggct 300
 gcagtgtata caggagataa gcatgcactt agcagagttg cgaacagttg tggtcacta 360
 aaatgaaaat ggttttgccc cgagttcaaa a 391

<210> 2029
 <211> 268
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-G2
 <400> 2029

actcctctat caagcttcat gctaatcggc gcgctgtctgc agttgcggcc agccatatca 60
 tggcgatgat cagcacgttg catgacgata gagccgcat gcaattagaa gcactgcagg 120
 acctgaggtt aatcgaccag caggttgacc acgaccactt agccatagac gatctgtatc 180
 gtgcgtcac acacacggac aactggttgc ccatctgga cgccgtacct gcacactgcc 240
 tgtcgtcct gcgcaacgac gatccgtt 268

<210> 2030
 <211> 420
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-G4
 <400> 2030

gcttcatgaa aaacggagcg cgtcggcagt tgcggctagc cagacgatgg ccatgatcaa 60
 taggttgcag gaggagaagg ccgcatgca gatggaagca ctgcagcacc tgaggatgat 120
 ggaacagcag gctgaccacg accacctagc gatacaggat ctgcatgatt tgctcacaga 180
 gagggagaaa gaattgctcg acttggaacg tgaacttgca cactgcagga ggctcctgca 240
 gaacgacgat ccgttcaatg gcgacagatt tgatggcact gattatacaa cgaacaacaa 300
 cacggatttt gtggggagcg ccatgtccca ttttgaagac gacaaggcat acattttgga 360
 atccttgagc agactggagg aaaatcttgg catttccaca atcagacttg cttctggtga 420

<210> 2031
 <211> 437
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-G7

<400> 2031

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cgcggggctga cacacgcgtc aagacttcat cgagaaaagc cgcggtgccg acccgagag 60
gatgatccgc gcctacgcac agtcggtggc gacactcaac ctgctccgcg cgttcgccac 120
cggagggttac gctgccatgc agcgcgtcac tcagtggaaac ctcgatttca tggatcacia 180
cgagcaaggt gataggtacc gtgaattggc ccataaggtg gatgatgctc ttgggttcat 240
gactgcatcg gggcttacag tcgaccacc gataatgacg actactgact tctggacctc 300
gcacgagtgc cttctcttac cctacgagca ggctcttacc cgtgaggatt ccaccagtgg 360
ccttttctat gattgttcgg cccacatgtt gtgggttggg gaagcgaatc gacaactcga 420
tgacctcat gttgaat 437
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<210> 2032
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-G9

<400> 2032

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gggtggaggtc gcggtgctcg ccacggtgcg cgcgcccgcg gcgctgtgcc gcaaggccgc 120
ccgcgtgcgc aagggccgca ggcgctctgc ctccgcgggc caggccacgg agatatatga 180
gtcctctctg gacgacaccg gcatcgctga agtggttgcc ggtgccgcca atgccgtggc 240
gctgcccgtg aaaccgcct tgcattctga ggaaaagggg gagctggaga aggaggtgtg 300
ggccacgttc tacggcaccg gcttttggag gagcccgtcg cagctggacg acaactacga 360
caggtgatcg ggacaggctc gcgagcgagc tatccacaag ctctccggc gatgcgtggg 420
c 421
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<210> 2033
 <211> 408

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-H10

 <400> 2033

 gtcgtattaa gggacttccg ttccgtgcta gcgcgcgatc gcgtcggcct ccactccacc 60
 ttcccgaaaa agcttaccct ttgtgtttgt gtgtctgtct ggcaatcgat cgatctccat 120
 gacgacgtcc ccgccgcgcg cacgcctgct cgccatggcg ctggcgctgg cattcgctg 180
 cgtgctgctc gtcagggtccg cggacgcgcg cacgcccggc ggctccgcgt acgggtgcaa 240
 cccggccacg gacaggacgt gcaggcccgga gggcgctcggg gtgggtgctgc ccgacggcgg 300
 cattgacctc gacggcgacg gcgacgagga cgagctgccg cagttcgacc cacacttcac 360
 gatcctcggc catgcccagt gagtgtgagt gcagggtgcag ctggctgg 408

<210> 2034
 <211> 416
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-H12

 <400> 2034

 tgagtcgtat acctaagcag ctaccagcca gtccgatccg gctagagacc gtagacggcg 60
 cacacacctt tcatccaata catacatcta tctgagccct ttcccgcagt gaggcccgac 120
 cggagtccac acacacatcg tgtcaatcgc gggcgtaata aggagccgcc gccgcgtgtc 180
 cgttttcttc tacgtcgtec tcgccgcagc tgcagctgca gccgcggcgc aggcattcaa 240
 taacgtcacc tccgacgagg agtactgggc ggagcgcgcc gaggtggctc ggtcgcgcaa 300
 cctcgccgcc tacgtcagcg acccgtggc cgccacgaac cgcttcaacg cggacgtgct 360
 gagggccacg acgcggcggg cgtggcgaa gtacgatggc ccgtgcatgg cgacca 416

<210> 2035
 <211> 340
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-H2

 <400> 2035

acgcgtccag tagagttcag ggcattgggt tcgattcctgt agttgatcct gtcgatagac 60
 cgtgatacga cttccccagc caaagctgag atcgacatg tgatcaacca tatggtgagt 120
 ctccgagtggt tggctgggta ggctcgtttc gaggggaacg tttttatggt agcaccactg 180
 tcgggcttca ccaaagagga ttccgtcgac ctcaactgagg tgagggttcat tgcgctcacg 240
 agcctatacg gcacgcacgc cgatgattgt gtgcacaccc tgggagattg ccatgtgtac 300
 tatgccgatg tacaacggta gaattagtga gacagcagct 340

<210> 2036
 <211> 403
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-H4

<400> 2036
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 aacaacagca gcagcaagcc caccggttcg acgacatggc ccgctcggc gccggcgccg 120
 tgttggcgct cctagtggcg gtcgcgcgcg tggccgcgtt cctcggcggt cgggctcgg 180
 cgaagtccgg ggagctgagc gcgatggggt tgctggcggc gaagggcggc agcgcgcgcg 240
 gcccgagaa gtgctcgggc gcggtgggcg agtgcgacgt ggacgaggcg gaggagctcg 300
 ggctgagcgg cggcggcctc ggctccgacg acgcggtgcg gcggacgctg gcgcagcgga 360
 agccgaccaa ccggtacatc agctacgagg cgctgcgcgc gga 403

<210> 2037
 <211> 443
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-H5

<400> 2037
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 gatgccgcta ctatggaacg cgagccgctg gtagcagcag cagcagcacc acaagaagag 120
 aaggccaaag ctgaggagaa gacgacgcag ccaactaagg ccgtggaatc tgccaagtgg 180
 aggacgaagg atgaaggag gagcaacgaa gccacagagg agggcagggg caagtctacc 240

actactgctg ccaccagga gaggaagaac aaggtgatgg ccttggttgg gaggtttgag 300
 actgccatgt ctggctgaga agagatcaga acgaggtgat gtcaaaagac tgctctggct 360
 catgaaaatg tgtacgagta ctactcaact gtgcaggcgt ggaggggttcg tatgtgtcgt 420
 ttcattaatt aatgtggctg ttg 443

<210> 2038
 <211> 416
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-E7
 <400> 2038

accacgcgt ccatcgaccg tcggaaaatc gacgaacatc ctgtggcatg agtgcgccat 60
 cgggcagaag gagcgacagg gtctgctgaa ccacaagggc tgcgtcgtgt ggatcactgg 120
 cctaagcggg tcagggaaaa gcacgctcgc gtgcgcgctg agccgcgagc tgcacggcag 180
 atgccacctc acgtacgtcc tcgacggcga caacctcagg cacgggctga acagggacct 240
 cagcttcgga gcagaggacc gcaccgagaa catccgcaga gtaggggaag tagcgaagct 300
 gttcgccgac gctggcctcg tctgcatcgc cagcctcata tcgccctaca gaagcgaccg 360
 aagcgcgtgt cgcgatctgc tgcgcaagca ctcgtttata gacgtgttcc tggacg 416

<210> 2039
 <211> 416
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-E8
 <400> 2039

cacggtcta catcacgct ctctaccaa ataaggtccc gcccttttcc gacattcaca 60
 ggggggacag gaaatcagcg gccatggcct cgattccggc gacgacctc gccgtcatct 120
 tatccgtcct cttctgtgcc gcggctggca ccgccgtcga caacgacctc cccgactacg 180
 tcatccaggg ccgcgtctat tgcgacacct gccgcgccgg gttcgtgacc aatgtcaccg 240
 agtacatcgc gggcgccaag gtgaggtctg agtgcaagca cttcggcacc ggcaagctcg 300
 agcgtccat cgacggggtg accgacggga acggcacgta cacgatcgag ctcaaggaca 360

gccacgagga ggacatctgc gaagtgggtct tgggtggagag cccgcgcaag gactgc 416

<210> 2040

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-E9

<400> 2040

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ggcgttcccc ttcctccgct gctgccagtg gtggttgag atgacacata tgtttccaag 120
ggaagggtgcc tcacttagct caacctcaat gagcagccag aggagtgaag ctcatgatga 180
taggatgatt gcaatgggtc tctccgaaga atatgccaa ttagatgggtg ctatggccaa 240
gcgtcttact aatttaacat caattcctca tgttccccgt attaacacat actttccaac 300
atatagtgat gccactatgg accattatcg cctccttgat aggctaaatg catacggctt 360
gtttgagggtg agagtatctg gtgatggaaa ttgtcagttt cgtgcact 408

<210> 2041

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-F1

<400> 2041

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cccatggctc gcgctagcgt cgtcttcgtc attgctactc tcctcttcgt cgccatgggtt 120
gtggcaccga tggccgaggc aaagtccgct gatgccccct ccgccgacgc ccccgcccc 180
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gtcgaggggtc tategggcaa tgaggacgac gatgatgact ccaccaacta aggccaagca 300
cgtcggtccg gttgcatttg gaacaagaca tggaagaaaa gtgagagcaa tgtcctttta 360
aaccaaaagt ccataataat gtgtgggtcat ccgtgatatg ttcttgctcc ccctcttttt 420

<210> 2042

<211> 440

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-F10

 <400> 2042

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 cagccaagag ctatccatac gcacagcgat gcaccagcac gagatactag ccatcatgcg 120
 cctgtcgtcc ctctctctcg tcgtggccgc cctctcggcg cgcgcgcggg cgcagcaggt 180
 gccgccggtg ggcggcagcg ctctgaagcc ggactactac agccagtcgt gcccgcgcgc 240
 ggagaggatc atcgcggagg tgatgcagac gaagcagatg gcgaaccgga cgacggccgc 300
 gggcatgctg cgcgtcttct tccacgactg cttegtcacc ggggtgcgacg cgtcggtgct 360
 gatcgcgtcc acccagttcc agaagtcgga gcacgacgcg gagatcaacc actcgtctcc 420
 cggggacgcc ttcgacgccg 440

<210> 2043
 <211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-F11

 <400> 2043

 caagaagcaa accagcaatg gccgcgcct gcgtcttct cgtcgtgctc ctctagccg 60
 ccgtcgccat ggcgcggttc gcgggcgcgg cgcgcacga cgtcgtcgag ggcaggtcca 120
 tggcgtegcg ggacgcaccg gagggccgcg ccgacgctcc cgtcctgct cctggccccg 180
 actcctctc gaccccgctg ccggcacct ccagcagcag ctcttccgac tagccgcccc 240
 gcagagatat ctacggcgtc cgatcagtct ttggcgccac ctatgaccta tcggatcctg 300
 caaagctatg tatgattcta tggataatg tgtggttggc ggaaacgccc ggaaataatg 360
 tgcttgctg attggttttc tctctctttt tt 392

<210> 2044
 <211> 424
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-F12

<400> 2044

ctctggagaa agtcgtcata atccgcggca tcacgtgct caacagcaag ttcttcacc 60
tcaacatctt cgagtgaag aacgtgctga tcgacaaagt gacggtcaag gccccggcg 120
acagcccaa cacggacggc atccacatcg gcgactccag caacgtgacc atcagcagca 180
ccaccatcgg cgtcggcgac gactgcatct ccatcgcccc cgggagcaag atgatccgca 240
tccatggcgt caagtgcggc ccaggccacg gcatcagcgt cggcagcctg gggcgctaca 300
aggacgagaa ggacgtggaa gacgtgcagg tgacgggggtg cacgatcgcc ggcaccacga 360
acggcctgcg catcaagtcg tacgaagact ccaagtcgtc gctcaaggcc aacaagttcc 420
tgta 424

<210> 2045

<211> 408

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-045-Q1-E1-F3

<400> 2045

taccggtctg atgctcccg gtcgctncac gcgtccacag aatcagctac aaaccatgat 60
ccaatcctag cggctagcga tctctagttt atattacaat taggagcaag cgatccaatt 120
atcgatagag cgcgagatcg atcgatcatg ccgggcccgt cgggtggtctc catcctctc 180
ctcctctctc atggcctcct ctgctgcag ctggctgcct tggccgagat ggacgacgac 240
gacgtcatgg aggacggcag ctgcatgcat ttcagtgtgt ccccgccgcc tgctccgccg 300
gaggacgcgg atgagcggcg cgactatttc cgcgccatgc aggccaagga tctgttcggg 360
cacgagcaga tgatcacgat gatgggcaac gaccggaaac gcaacagc 408

<210> 2046

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-F4

<400> 2046

cacgcgtcaa gagcctcatc ggcacgttcg atgagatcca agacgggcgc agcggggtgc 60
 cgcccagcga cttccccaag tggctgccgg ccaccacagcg gaggtcctg cagcagaccc 120
 agaagcctaa cacggtggtc gcccaggacg ggagcggcga cttcaagacc atcaccgagg 180
 ccatcaccgc cgtgcccaac accttcgagg ggcgcttcgt catctacgtg aaggccggca 240
 cgtataagga gtacgtcacc gttcccaaga acatggccaa catcttcattg tacggcgacg 300
 ggccgacaca gacggtggtc accggcgaca agagcaacgc atgccgcttc gccaccttcg 360
 cctcagccac cttctctgct gaaggcatcg ggttcatctg caagtcgatt gggttcctca 420
 acacggcggg 429

<210> 2047
 <211> 376
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-F7
 <400> 2047

acaagcctct acaatgagtc tcattcatctc actcaccggt ctttcacgcc tccctcacca 60
 aataagggtcc cgcccttttc cgacattcac agggggggaca ggaaatcagc ggccatggcc 120
 tcgattccgg cgacgacctt cgccgtcatc ttatccgtcc tcttctgtgc cgcgggtggc 180
 accgcccgtc acaacgacct ccccgactac gtcattccagg gccgcgtcta ttgcgacacc 240
 tgccgcgcgc ggttcgtgac caatgtcacc gaggatcatc cggggcgccaa ggtgagggtg 300
 gaggtgcaagc atttcggcac cggcaagctc gagcgtccca tcgacggggg gaccgacggg 360
 aacggcacgt acacga 376

<210> 2048
 <211> 439
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-F8
 <400> 2048

ctgcggggct gacacacgcg tctaccaca cttccggtag caaatgttgg agattctaga 60
 gctgttattt ctaaaggagg acaggcgatt gcggtttcaa gggatcacia acctgatcag 120

acagatgaga ggcaaagaat tgaggatgca gggggctttg ttatgtgggc tgggacatgg 180
agagtgggtg gcgttctcgc tgtctctcga gcatttggtg ataaactctt gaagccgtat 240
gttgttgctg accctgaaat caaggaggag gtggtcgaca gctccctcga attcctcatc 300
cttgctagcg atggactctg ggatgttgct actaatgagg aagctgttgc catggccaag 360
cctatccagg acccccagga agcagcagac aagcttctcg aagaggcttt cccgaaggga 420
aactccgatt acatcacag 439

<210> 2049

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-F9

<400> 2049

gggtccgacc acgcgtccga gcaagcgtcc gatcacaagg agaaggggaa gggcggcgag 60
ggaagggctc cgcgtcgtgt cccttctctt cctcctctc ctcctcctct ctccaacacc 120
ccatccatca gcgctgccct ccgcattgct cttgatccca tccagtacat cgattctccc 180
ccaagatca aaggccggag gaggaagaaa ggtagggag tcggccatgg gatgcttttc 240
atgctgctgt gtggcagatg acgacaacgt tggcaggagg aagaagcatg acgatcccta 300
tgttcctatc cctgctcatg tttataattt tggacctagc cggttccag cccaacccc 360
tgtcatctcc actggcagag ctccagccaat tgcagtaccg gccattcatc tggaagagct 420
gaagg 425

<210> 2050

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-E4

<400> 2050

cgtcgcgcaa cggtagggcg tggccggtgg caatggcgcc cactgacttc ctccggatcc 60
ccttctctcc cgcgcgagc cgctccgcta acgtcaacgc cctccgctcc tggtccccc 120
gccgccgttc tctcaaatcc agcgcgacca acggtgacaa ttccctcccc aatcccatct 180

ccacctctcc cacctcgccg ccttggttaa cgttggtgga cgttaacggg ttgcgtcgcc 240
cgcccgcgcc tgtttccgcc cctaccatcc ccggggacgg cgggtcccgg tggtgcctc 300
ggccgttcac tagcgcggaac gtcattggggg cggatt 336

<210> 2051
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C8

<400> 2051

tcgcggggccg acacacgcgt ccaaacggcg ccatcatcag gtccgagcgg ccgagcgcca 60
ggaactgcct cgccgacgag agccacgtgt gctggaggaa cggcaagttc gcgcaggaca 120
tgatcctccg gctcaggaac gtcgagagcg gggagataca gctgcagctg cagtgggtga 180
acttcctcc tggtcctgct cctgctgctg caacaaccag gtgacctgat cgatggtagc 240
tgctgttcct gtcgccattg cctcctgctg gcaggaacag gaactctctg aagcacgggg 300
tcagggtagt tcatgttgct tcgattcgat cgtaggggag ataatgccgg atggctttgt 360
aaagtttggg aggacatgca tcataattga agtcaagtga taggatcctg ttttt 415

<210> 2052
<211> 115
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C9

<400> 2052

cgtattaggt aggatggcgt tcatcatcaa tgtcgcagtg aacgctgcgg ccgtggctgc 60
gctgctgctg gtctcagcgg tgtcgcctgt cgcgctcgct gggggggctg ctgtg 115

<210> 2053
<211> 297
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-045-Q1-E1-D1

<400> 2053

cggatctatg atgtgccctt gcttgattcg ttattgggtc tctagccaag aagatgaaga 60
 acaacaacaa caacaaaaat atatatatgg tgctgcgtat gccattgta acagttgatg 120
 agatctgtga ctecccggtc cgtgtcccggt gagttgctga tgatttcac ccccgcccc 180
 accgggncca acacacacac acttttttta atctttcccc ttaatatggg gtcccaaatt 240
 gatgcggaga tctcgagcga ctctgcaaat ttcagatgag tggacatatg tcgaagg 297

<210> 2054
 <211> 433
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-045-Q1-E1-D10

<400> 2054
 ccaagcgtct aaagagactc tgcgtacgtg tgtgcagcga gcagctaggg catatgcatt 60
 atttcagaag agaactagct actccgatca agatgagcga cgaaggattg tacgtatatt 120
 gctgagagga gatcgaagag acggtgatga gttggcggaa gatcgatgca tgcgtggatg 180
 atcatcacag ccaatcgtac gtgtgtaaaa ggtcngccgg aggggggaat aatcgtgcat 240
 gagacacctc tctcgctcgc tcttcctctc ctacgtctta attcattggg ttcgtcgatc 300
 cgagatccta cgtacgtcgt cgtttttgta ttgtatatat tataggtcat catctcgtgg 360
 gggatcatcag atctggcggg ttggtggtgt gttgtaattt gtaaagagat cgatcaaggg 420
 tgatgcggtg tgg 433

<210> 2055
 <211> 395
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-D11

<400> 2055
 tggatagctg cgccacgacc tctcctgctg tcgctgctgg tcgccgtgct agcggtggcc 60
 gccgatgtcg ccaacgccgg ccacgccaag cccctgacgc ctggcgggcg tgtggtacac 120
 gacaaccacg gcaagttcac ggccgggccc tggaaacccg cccacgcgac cttctacggc 180

gggcgggacg ggtccggcac cacggcgggc gcgtgcggtt acaaggacac gcgcacgcag 240
 ggggtacggcg tgcagacggt ggccgtgagc acggtgctgt tcggtgacgg cacggcctgc 300
 ggcgggtgct acgaggtgcg gtgcgtggac agccctagcg ggtgcaagcc cgacgcggcg 360
 gcactggtgg tgacggtgaa cgacctgtgc cccgc 395

<210> 2056
 <211> 401
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-D12
 <400> 2056

cgtatgaagg acgcgccgcc agttgttgcg gagaccgtg cgcggccac caccacggag 60
 gtggaggtgg agtccccaa gaaaggagcg gcgcgggtgc cagagcccat cgtcgttgtc 120
 gccgcagtgg aggacgtggt ggcggacaag ttcgtggcgg tggatgaagg ggcgatcaag 180
 aagccggaga tggacgagaa ggaggtggcg atgcggagat tcctgggcag ccgggtgaag 240
 acagcgatgg agccgcggtc agagtcggag cagccgcggc gccgggaggt ggctcggatc 300
 aacgacgtga tcgaggcggc acgcaccaag ctgatgcaca agcggcagtg cagcagggtc 360
 aaggcgctcg tcggcgctt cgagactgtc atagacacc a 401

<210> 2057
 <211> 391
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-D4
 <400> 2057

acgcgtccag atggttcgtg gatggctgcg ccacgacctc tcctgctgtc gctgctggtc 60
 gccgtgctag cgggtggcgc cgatgtcgcc aacgccggcc acgccaagcc cctgacgcct 120
 ggcgggcgtg tggtagacga caaccacggc aagttcacgg ccggggcgtg gaaaccgcgc 180
 cacgcgacct tctacggcgg gcgggacggg tccggcacca cggcgggcgc gtgcgggtac 240
 aaggacacgc gcacgcaggg gtacggcgtg cagacggtgg ccgtgagcac ggtgctgttc 300
 ggtgacggca cggcctgcgg ccgggtgctac gaggtgcggt gcgtggacag ccctagccgg 360

tgcaggcccg acgcggcggc actggtggtg a

391

<210> 2058

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-D8

<400> 2058

acacacgcga ccagtggaat tcgacgacga aactccgtca cgtcattcct ctgcgcctcc 60

cgtctggccg tcttcagac gtctccaatc ggagctcca gcgtctcgga gaagaggagc 120

agcacggcac ggcggctgtg gcgaggaagg ctctgtcct gtcccatccc aaccagcag 180

ccgtccaagg aggaggagat ccaatcggcg tgcaggcgtc caccgtccat ccatcgatcc 240

aattccaatc tgcaggcctc tgcgtcgcg cttgttcgtg gaggagaggt tgctgtggaa 300

cccgccgcca gttagccatg tcgtcctccg tgctgagggc tgcggccgac agggctattc 360

gcaggcacgc cctcacgctg acggacgccg cggcgttcag gatccgggag ctctcagcc 420

tcagggc 427

<210> 2059

<211> 232

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-E2

<400> 2059

tggagccggt catggcgccg tcgtcctctc tgccgcggag cgccagcgag ctaccggacg 60

cgccgtcagc gttcatctcg aacacggcgc agtaccgcgt ctccgtgccc accacgtgct 120

aggttgctcg tatgttgctc gtcgttcggc cacatggtga gcccgccac ccacacatcg 180

ccgatgacgc ccagcagaaa gcatgaccac aagcctaagc cgaggccgga cg 232

<210> 2060

<211> 426

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-045-Q1-E1-A9

<400> 2060

cctctaaact gacgtcctag tactttcttca tgggtgggggtt cgccccgctg acgtcccgcg 60
gctcgcagca gtaccgcgcg ctgacngtgc cggagctgac gcagcagatg tgggatgcca 120
agaacatgat gtgcgcggcg gacccgcgcc acggggcggtta cctgacagcg tccgccatgt 180
tccggggcaa gatgagcacc aaggaggtgg acgagcagat gatcaacgtg cagaacaaga 240
actcctecta cttcgtggag tggatcccca acaacgtcaa gtccagcgtg tgcgacatcc 300
cgcccgctcg gttgcccatt gcctccacct tcgtgggcaa ctccacctcc atccaggaga 360
tgttccgcg cgtgagcgag cagttcacgg ccatgttccg gcgcaaggct ttcttgcaact 420
ggtaca 426

<210> 2061

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B11

<400> 2061

gtattactcg aaaccgagcg ccgcgcggca ctggaggccg cccctcagc cgccgcgcgc 60
cgagacggag gaggcggggc gtcgcgggct aataataagc gcggagtccg cgccgcgcgc 120
ccgccgctgc tggacgagcc gtcgtggacc atgttctgca acggcaagaa gaccgggtac 180
gcggtgcgaa ggcaggccac ggacgacgac ctgcgtgtga tggagacgct gcgggcggtc 240
tccatgggcg ccggcgtgct ccccgggagg gccgccctt cgtcggcgcc cgacgctgtt 300
gctgcggcgg cagcggacga cgaggtgccc tacatgcgcg gctgcttcga ccacttcgtc 360
gggttccggg act 373

<210> 2062

<211> 312

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B4

<400> 2062

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ggaggctctg atgaagcccc cggtgtgctg tgcccatcgt gtgctgcgca tcgtcggtc 120
 cagcgcagtc ggtgtctatt gctcatgacg agagctgctg gaatgacgac gaccaccatc 180
 ctatctgctt tcccgaagac tgcttggcga cctgccatga tcaccggcac tcagaccgcc 240
 gctgcaactg ggcatggtcg tggaggccgt attaccagtg cctgttggcg gactgccaat 300
 aagctcgaac ag 312

<210> 2063
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B5

<400> 2063

acacgcctat acacagacgt cctgcctatg cgattcctct cccctcgctt cctcgtctcc 60
 ccctagggga tcgtcggaga ggaatcgcaa agagggccgt ctcatccgag ttaaggaagc 120
 catggagcac aaggaggctg ggtgccaggc ccccgaggga cccatcctct gcatcaataa 180
 ctgtggcttc ttccgcagcg cggcgaccat gaacatgtgc tccaagtgcc acaaggagat 240
 gataacgaag caggatcagg ccaagctggc tgctcctct atcgacagca tcgtgaacgg 300
 cagcgacgcc ttcatggagc cggttgttgc tggcagcaac acagtagtag ctgttgccca 360
 agttgagttg caaacaatga acgtgcagca gcccgtgat gttgccggac ccagcgaggg 420
 ggtgg 425

<210> 2064
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B6

<400> 2064

acactcctct agcttgactc gtagtacgac gagctgtgca tgctcacggt gccgcacggc 60
 cacctcaagt cgtccaacat cctgctcgac ggccactacg agccgctgct gacggactac 120
 gcgctggtgc ctgtgatgaa ccagtcgcac gccgcgcagc tcatggtggc cttcaagtcc 180
 ccggagcgga agcagttcgg ccgctcgtcc aagaagagcg atgtctggtg cctcggcctg 240

ctcatcctcg agatgctcac cgggaagccg ccgacctacg acctgcccac ggccggcgggg 300
 gcggtgccgt cggccgaatc gttgtcgtca ccgcagaaac cgggtccggc ggccgggcaac 360
 agcactgacc tggttaccgt cgtgggggtcg acccgggagg gcagtggctg ggcaccgtgg 420
 tggacc 426

<210> 2065
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B7

<400> 2065

acaaccctct agaataagtc ctattaacgg gcacgcagtc gtggtcgccc tggcctcgcc 60
 acggtgttct agtgcggtgg cgctgtgcct tggcgctccg actgccttcg tgggtgagtt 120
 cgtggacggg aaccgaatgg cgctggggca attgctcgcc agacatgggtg taccgccgtg 180
 gtgtagttcg gcgacgggaa ccgaaccac ctcacccaaa tcaccggtat gcgttgttca 240
 cctgtgttcg cctaagactc aaaatacgta ggatcggtcg ggtcgtgtgt cggttgccag 300
 gggacggttg tgcgtgcacc aaccatggcg ccgccggggg ctggaaagct ggagctccgt 360
 cgagctcgag aattttgcaa acatgacacc atctacggag ggcttcaaac tttt 414

<210> 2066
 <211> 382
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-045-Q1-E1-B8

<400> 2066

acaatccact acacacactc ctaataatct caagagacca gaaaactggg cactagtttg 60
 agaaagggaa naatacaatc cacaattccg ggatttttcc cttacggtgt cacctgattc 120
 catcaattta gttcctgagc atgctgcaac aaataaaaaa gtgttctca tgaacctctc 180
 tgctcccttc atctgtgagt ttttctgtga tgcnaagag aaggctctcc cgtatgctga 240
 cttcatcttc ggcaatgaaa ccgatgcaaa aatcttcgcc aaagttcgat gatgggagac 300

agagaatgtc gaggagattg ctttgaagat ctctcagctt cctttggctt caggcaaaca 360
aaagaagact gcctgtatta ct 382

<210> 2067
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B9

<400> 2067

gagtcgtatt acgtcttcca tggcctcctc gtagtagaat agctctatct caccgcaaca 60
actcctcatt acatccttta tgagaggctg atcgattggg agatacgtac tcgggtggag 120
cagaacaacg agagacatgg cgacgacgac gcgtgttgcc gccaccgccg ccggcggtgct 180
gctggtcctg tcggcggttg cgaccctggc gcggggccgag gacccggtacc tgttcttcga 240
gtggaagggtg acgtacggga ccaagtcctt gctgggcgtg cccagaagg tcctcctcat 300
caacggcgag ttccccggcc ccaggatcaa ctgctcctcc aacaacaaca tcgtcgtcaa 360
tgtcttcaac cagctcgacc atccgctcct tttcacctgg aacgggatgc agcac 415

<210> 2068
<211> 456
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C1

<400> 2068

accggtctga tgatccgggc ggccccacgc gtccacatgg tccaagtgat cttgccaagt 60
tacgagcagc aagcagagat cagatcatcc atcggcaatg tcgaacatcg ggcagtcctt 120
ccaggccggc aaggcggagg cccaggggcg gtaccaggcg gagcacgcgg cgcagtgcgt 180
caaggacacc gccggagccg cgcccgacag cgcgagctg cagcagcacc gcgccaccgg 240
caccgttgag caggtggcgc agacggggcca gggcgtggcg gcaggcgtca aggacacggt 300
ggcggggcgc gcggttgcg tcaccaacac ggtggcgggc gtggcggcgg gcgtcacgaa 360
cacggtgacc ggcgcggtgg cgggcgtcac gaacacggtg accggcgcg cggcgggtgt 420
caaggacacc gtgaccggcg gccactgatc gacgac 456

<210> 2069
 <211> 404
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C10

<400> 2069

tccggcaata tggggcgcca gagatcattc taggtgcagg atactcgttt tctgttgaca 60
 tgtggtcctt cgcattgtatt gcttttgagc tgcgaacagg agaaatacta ttacaccca 120
 aggaaggcca tggatacagt gaagatgagg atcacttggc tttaatgatg gaactacttg 180
 gcaagatgcc gaagaagatt gcaaccatgg gaacacgac aaaggaatat ttgaccgcc 240
 atggagatct gaagcggata cgaaggctga aattgtcatc cattgaacgt gttctcgttg 300
 acaaatacaa aatttctgaa tctgatgccc gggaattcgc caattttctt tgccctttac 360
 tcgactttgc accagagaag aggccaacag ctttagattg ccta 404

<210> 2070
 <211> 410
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C12

<400> 2070

tcataatatg ccagatgtac tgagaaaggc tgatattcat aagattcagg cagagcttgt 60
 gtcattgtctt ccgtcgttac ctcaccttc agatctacaa aagctgaagg atgagctgaa 120
 gacctcttgg aattctatgg aggttcttcc atctctgtcc cgttggcacc tcttgagatt 180
 actcgcaaat tgtctgccac acagatttac ccatcccaat gaaacaagtt tgtctgttct 240
 tcaaagcatg aaggaggatc tagcaagcct gattgcaccg caactgatca gaccaattgc 300
 gcggtggcca ttctatgcct tcttgggagg agccatgttc tgccctcctgg ccagcagcac 360
 ttgccacctt ctctcctgcc attctcgccg cctagcatatc attatgcttc 410

<210> 2071
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C2

<400> 2071

cacgcgtcca caaaagcatt gaagccgtag ccgccgccgc cggacgagac aggttgaggc 60
ggggcgga tggccgccgg ggaccttgag gtgctcaccg cgctcgacac cgcaagacg 120
caatggtacc acttcaccgc catcgtggtc gccggcatgg gattcttcac cgacgcctac 180
gacctcttct gcattctcct cgtgactaag ctctctggcc gcattctacta caccgtggag 240
gggtccgcga cggccggcac cctcccgccg cacgtgtccg cgctcgtaaa cggcgtggcc 300
ttcgtgggca cgctgtcagg gcagctcttc ttcggctggc tgggcgacaa gtcggggcgc 360
aagaaagtct atggcatgac gtcattgccc atggctctcg gctccgtcgc gtcggggctc 420
tcgttc 426

<210> 2072

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-C4

<400> 2072

acgcgtccac agacgcgtgg gggcctgggtg aacgaccgag agatccgttc cgtggcggcg 60
atggtggccg gcgacaaggt ggccttctac cactgcgcgt tctacagccc ccaccacacc 120
ctgttcgaca gcgccggccg ccaactactac gagagctgct acatccaggg caacatcgac 180
ttcatcttcg gcagcggcca gtccattctc cagtgcctcg agatcttcgt gaggcctgac 240
cggcggacgg agatccgcgg ctccatcacc gctcaggtgc ggcaggagga ggacagcagc 300
ggcttcgtct tcctcaatgg caaggtgtac ggcgtccgtg aggtgtacct gggccgcgtc 360
accgcgccgg actcgcgcgt catcttcgcc gacacctaac tctccaagaa catcca 416

<210> 2073

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-A8

<400> 2073

acaagcctct aatgtgagtc gtagtacgca tcaacaatcg ccgagagcga tcgagagata 60
aataaagatg aagaaagtgg catcatcgtc agccgtttctc ttcgtgctag cgctgacgct 120
agtttgtgcc ccgctgatag cagaggcaaa gaagaagaga gtcgccgccg ccgccgccga 180
ggagaagaag gtgcaggaca acttctgctc gacgctgtgc gagggcagga aggggatgga 240
cctggtggtg tgcaaggagt cctgcgacct ctacacagcgc tccaacctgg tgctgtacgg 300
ccggateccag tgcaagggca agtgcaccga gcagaagggc atcaccgcgc cgcagatgaa 360
cgtgtgccaa gag 373

<210> 2074

<211> 284

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H10

<400> 2074

ggtcgacgca cgagtgtaat cgccgtcgtc gtggggcttc acttctccta gaacgccgaa 60
ggccaagaag agaagaaggc gagacgtgca gtccgtcagg cagcgtcga taagagggaa 120
gcaggaggag gctagacatc gaactcatca acgaaccaag tcgtacgtcg tgctcatcat 180
cacgtgacgg cgcgtgccgc gtcaagctaa gtgtccagga aggggcactc cgcagcgatg 240
acggtggtgg aggagtccgt ggggaagggtg gaggacactg cggt 284

<210> 2075

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H11

<400> 2075

tcgcgggtcg atacacgcgt ctaaagtcag tcatgctcag gaggaggctc tctcctgtcc 60
tacctgttcg ctcccggtc cctccatct ctttcgccac acgcgcgaga gggaggagag 120
gaaacagcta gcagcgagcg aggaacgaag aggggtgcttc gcacgtgcat gcgagatcga 180
tcccgatcgt cggccggcgg gaattgaact agcgacgacg tacgtgacg cggggcgggc 240
gttgatttaa ttattccggc ctgagcaatg ggcaagatcg agtacggcgt ggtggcgcgc 300

ggcgcggtgg tgctggcgga gcactacggc gcggcggcgg cgggcggcaa cgcgggcgcc 360

gtggcgcggc aggtcctgga ggcctccct ggcggcggcg acgacgactg caacg 415

<210> 2076

<211> 244

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H12

<400> 2076

ccggcaacca ccggcttccc tctccgtccc caaccgaccg accaacgcgc cgagcgaaga 60

tgctgtggca gacgtacgtg gacgagcacc tgatgtgcga tatcgagggc caccacctca 120

cgtcggcggc catcgtcggc cagcagggcg ccacctgggc tcagagcacc gcattccccg 180

atttcaagcc cgaggagatg gctgccatca tgaaggattt cgacaacccg gggaacttcg 240

cccc 244

<210> 2077

<211> 62

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H3

<400> 2077

tctcatacaa gccagggcct caccaggatg gtcattgcaa ttatcactgc aagtactggg 60

ca 62

<210> 2078

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-H4

<400> 2078

gcacaaccaa gctcaacaac agccagctcg cgaaaataat gaagagccgc agcatggcat 60

catcggccgc gctcttgggtg ctagccctcg cgctagtggc ggccaccgcc ccacaggtag 120

cggaggcaaa gaagaagaga gcggcggaga gcggcgaggc ggcggaggcg aagaagatcc 180

aggacgactt ctgctcgacg ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca 240
 aggagtcctg cgcgctctcc cagcagtcca acctgggtgct gtacggcagg atccagtgca 300
 agggcaagtg caccgagcag aagggcatca cggcgccggc catgaaggtc tgccangagg 360
 agtgcgacaa ggcgtagctg gtgaaggcgg ccgaggttca caaggcctgc agcg 414

<210> 2079
 <211> 428
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H6

<400> 2079

cgtccaccct agcttgctcc tcgatccatc aattgcaaga ggagcaagat accaccaccg 60
 tagcaccaca cgcaggtacg aagaaggcga cgaacatggc gaggctggcc ttggtagcgg 120
 cgggtggttct gtgccttcta ttagcgacag ggccgcacgg ggccgtcagc gccgatggga 180
 tgggtgtcatt tgacaatttg atcagctgca aggtactggg caactgcgat aagaacctgg 240
 gccccgaggg ctcccgccca gggaaacccg ccaacgacta caccgcggc tgcaaccoga 300
 tcaccggctg tcgcggtga tcatatctct ctggctgatg tgcgcgcaat gtcaatgtcg 360
 cacgcgcgtg catgtaccag gccttagcgt gtgggtgcgg tgtgtgtata ttacacaca 420
 tgcatata 428

<210> 2080
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H8

<400> 2080

ggcgcaaac gtcacatcc acaacctgca cgtgcacgac gtcaagcaca ccatgggagg 60
 cctcatgcgc gactccccca cgcacatcgg ctcccgacc agggccgacg ggcacggcat 120
 ctccctcttc tccgccacca acgtctggat cgaccacatc tccatgtcca actgcgacga 180
 cggcctcatc gacgtcgtgc acagctccac ggggatcacc atctccaact gccacttcac 240
 caaccacaac gacgtcatgc tcttcagcgc cagcgactcc tggccgcagg accagatcat 300

gcagatcacc gtcgccttca tccacttcgg caggggcctg gtgcagcgga tgccaaggtg 360
ccgctggggc ttcttccacg ttgtcaacaa cgactacacg cactgggtca tgtacgccat 420
tggc 424

<210> 2081
<211> 193
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-A10

<400> 2081

ctccctgacg tgagtcgtat taatacagcc agcctccaat aggagcgagc cagtcaaact 60
gatcgcactc tctccgccgc catcagagcg aacatgctga ctgaccccggt ctccaaggca 120
atccgcagcc gacgtaccac caccaccggg ggagcgagat ggatatcaag atgatcctcg 180
tcgccgtcct cgt 193

<210> 2082
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-A11

<400> 2082

tcgtcgggtcc aagactctaa agaaagtcct ggcaatccag tcacggtgta catcactgac 60
atgaactacg agcctatcgc tccctaccac ttcgacttga gcggaaggc cttcggctcc 120
ctggcaaagc ccggggtcaa cgacaagatt cgccactgcg gcatcatgga cgtcgagttc 180
agaaggggtgc gatgcaagta ccccgccggg cagaagatcg tgttccacat cgagaagggc 240
tgcaacccca actacctggc cgtgctgggtg aagtatgtgg cggacgacgg cgacatcgtg 300
ctgatggaaa tccaggacaa gttgtcggct gagtggaagc ccatgaagct ctcttggggc 360
gccatctgga ggatggacac tgccaaggcg ctcaagggcc ccttctccat ccgcctcacc 420
a 421

<210> 2083
<211> 433

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-A12

 <400> 2083

 tacaacaccc tgacgtgagt cgtattaagc cgacttctct ctgcgctccc caacttgcct 60
 cacaggatgg tatcacttgc tcggacaggg tggcttgctg ctgcattggg gcccatgccca 120
 atggccttct tctgatgtg gaaacaacag gacgtacgcg ctctggtagc aggaacagcg 180
 atggttggcc tgagctcagg attcatcttc gccgcagcag tgtcagtgcac ctccgagctc 240
 tttggaccaa acagcatcgg tgtgaaccac aacatcctga tcaccaacat cccgctgggg 300
 tcactcctct atgggcatat cgccgccatg gtgtacgacg cgaatggaca aaggatgaca 360
 ctgatggata atcgactgg catcattgac accatgattg tgtgcatggg ggttaagtgc 420
 tactccacca cct 433

<210> 2084
 <211> 337
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-A4

 <400> 2084

 caggggtggcc tgctcttcaa gtacctgtaa aagggacaac accaagcaca cagcagaagt 60
 atacgatctc ccgaccgacc gtggacaata tcgaataact cctgccaaat cgccagttcc 120
 ttttgtgtac tgtgcgctag ccgcgcgcta gctgcactgc tgtatTTTTg tttcaggatt 180
 gctgctgctg ttgcattca atcgttgggc ctcccggagc cgccggaggc gcgttttact 240
 gttagcctta ctactcttac tccctgtagc tccacgtata agaaaccgat gtccctgcgtc 300
 tggcaatttg tcgtagtccc ttgatgatgg cgatgat 337

<210> 2085
 <211> 359
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-A6

 <400> 2085

ctcgtggggc gatacacgcc tctacatcgc ttcctcctac gccgcccgtc cgatccggtc 60
actggccggg gagggctcag aaacctttca tccaatacat acatctatct gagccctttc 120
ccgcggtgag gcccgaccgg agtccacaca cacacggtgt cgatggcggc cgtaataagg 180
agccgccgcc gcgtgtccgt tttctttctac gtcgtcctcg ccgcagctgc agctgcagcc 240
gcggcgcagg catccaataa cgtcacctcc gacgaggagt actgggcgga gcgcgccgag 300
gtggctcggg cgcgcaacct cgccgcctac gtcagcgacc ccgtggccgc cacgaaccg 359

<210> 2086
<211> 447
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-045-Q1-E1-A7
<400> 2086

ctcggggcgcc gaccacgcg accacgctcc cgactagcat ccaccggtgg ccaagacctc 60
tgccacgccc gaaccgtacg catctctgaa cgtcgccggc ggccggcagc ccaacgagcc 120
ggcggcgggg aggcgcgccg agctgtcgat ggagacgttc tcggggatga tcaagaggcc 180
gttcgccaag ttcttgagcc cggatgatcaa gggcgtgtgc gccaaagcgg agtaccggga 240
ggactgcgag tcgtcgatcg ggggcctccc gggggccgcg tcggcggcgg ccacggacag 300
cgtgggcgtg ctgaagctgg ccatggaggc ggtgcggcag aaggccatcg aggcgatgaa 360
cgcgccacg gacaggatga acgcgccggg cacggaccg acgaccaacg angcgctcga 420
ctcgtgcagc tcgtcgtaca gcgacat 447

<210> 2087
<211> 415
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-044-Q1-E1-G10
<400> 2087

cacgagtcta aactggacgt cctggaacgt cgtacgagaa cttttctccc tcctccacct 60
ttctcctttt cttgccacgg caaaacacct tcgccggcga gagcatggcg atggcgatcc 120

gtgtcctgga ggtcacccctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc 180
 ggactcgcat ctacgcctg gtttccatct ccggattcga cctccgcata ctttcccaca 240
 gcacccaagc agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc 300
 ccatcccggc tgccgctgac acccgcgcc tcgcactcca cgtgaggctc cgcgcccagc 360
 gtctatacct gggcgatcgc gacatcggcg aggtgtttgt gcccatcgac gacct 415

<210> 2088
 <211> 437
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G12

<400> 2088

ccccgggtcga cacacgactc tacatcgact cctatcaata tacatatata gacctataa 60
 gaacaaagac gtacgataac ctgcttattt tgcgacccat cccgttcca cgcaaaggcg 120
 ccgagcgtga tctccgtccg tgccgccatg gctcgcacc gggcgctgct gctgctgctc 180
 ctgcgcgcgc cgtcgtcgc tgcgctggcc tctgtcgcat ccgccgacga cgccaacgcc 240
 atgcccacca tctgacccc cgtggcgcat acccgcctgg ggtccttcga cggcgacaag 300
 ccggcctctg acgacgacgc cgtcgacgac gacgaggacg cggccctgt cggcgcgccc 360
 aacggggcca ccatgactga gccagggac gacgtccccg ccccgcccg cgccgaagca 420
 accgcgggcg gcgcgcg 437

<210> 2089
 <211> 406
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-044-Q1-E1-G2

<400> 2089

caaaacaaga acctccaatt agaagcaacc aaaggaactt attaaactcc taacggcggc 60
 aatccaaaaa acaaggcaaa ccgacccggt cccaaaggaa atccttcgcc gacgtacaac 120
 ggcaaccgaa ggacaaaaat ggagatgaaa aggatcctct tcgccgtcct cgtcgtcctc 180
 gccgcctcgg ccaccgcagt gctggcctcc accgaggccg ccgccgcggg cgccccaact 240

gcctccgagt cgctccgccga ggctcccgtt ggcgctggcg ctggcgctgc cgctggcgcc 300
gccgccgagg ggcctccgc cagcagcggc ggcgccgcc tcgccgccgc gcccgccgcg 360
ctcctcttct cncctctgc ctactacct cactaagcgt gtgcgt 406

<210> 2090
<211> 409
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-044-Q1-E1-G3
<400> 2090

cccaatggcc gcaaggggtc gttcgttccc ctctgtcttg gggccccttt tcctcgtcac 60
cctcttcgtc tcggccgagg caattgcccg gaccgtgggc gacaccgtgc aggacgcgtg 120
cagcaatacc aagttcccca agatctgcgt ggacagcctc gtcgccaatc cggagagcca 180
gaaggcgact ccgcgcaagc tggcagagct gttcgtgaac atcgcgggcg agaagggatc 240
ctggataggc agcttcgtgc accgcaagta cagcgacaag gatgacagcg acatattcaa 300
gtgctacgac agctgctccg acaacgtgga ggaggccgtc gcccacctca acggactcgt 360
ccgggagcca ccgacgcca gttcctcgag ctcaagtcgt agctctcct 409

<210> 2091
<211> 395
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-044-Q1-E1-G9
<400> 2091

gtcgatacac gaatctaaat tgctcgtat cacagggggg acaggaaatc agcggccatg 60
gcctcgattc cggcgacgac ctccgccgtc atcttatccg tcctcttctg tgccgaggct 120
ggcaccgccc tcgacaacga cctccccgac tacgtcatcc agggccgagt ctattgcgac 180
acctgccgag ccgggttcgt gaccaatgtc accgagtaca tcgcgggcgc caaggtgagg 240
ctggagtgca agcacttcgg caccggcaag ctcgagcgt ccatcgacgg ggtgaccgac 300
gggaacggca cgtacacgat cgagctcaag gacagccacg aggaggacat ctgcgagggtg 360
gtcctggtgg agagcccgcg caaagactgc gacca 395

<210> 2092
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F6

<400> 2092

tcataggacg atacacgcct ctacactcac gtccctaacag cccaacaag ttgtgtactg 60
ccaacggcgc ctccaaggct accgtcaagg atgtcacctt caagaacatc accggcacct 120
cctccacccc ggaggccgtt agcctgctct gcaactgccaa ggtcccatgc accggcgtca 180
ccatggatga cgtcaacgct gagtatagcg gcaccaacaa caagaccatg gctatatgca 240
cgaacgccaa gggcagcacc aagggttgcc tcaaggagct tgcattgctt tagaccctcc 300
gtcgactgac ccatctctct agttataatt tttctctcgt ccttgatttg ccatttagat 360
gctatccatt ggtaacgcac aacagtaaaa cgacagacat ccgacagcta tattatgttc 420
gacggtgtaa caccctgaat ttgagggtta 449

<210> 2093
<211> 435
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-044-Q1-E1-E2

<400> 2093

gggtcgacga acccttcggg ccgcggaaa cctaaccggg ccgggttcg ccaacggcaa 60
tggccccggc ataatcgggtg cttccccttg gaacggctgg ccttcgggaa ccgcaaacc 120
cgctgcggcg gtggccttct ccttaccggg gctcgcttct cccttctcgg ccttcccgg 180
tcctcccggc gccccgcccc cagcgggatc ggggccctc atgtcgaagg caaaggtcta 240
caccgacgtc aacgttctgc gtcncaagga gtactgggac tacgaggcgc tcaccgtcca 300
atggggtgag caggatgact atgaagttgt cagaaaagtt ggaagaggta aatatagtga 360
ggtctttgaa ggcattcaatg ttaacaatta tgagaaatgc atcattaaga tccttaagcc 420
tgtcaagaaa aagaa 435

<210> 2094
 <211> 364
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-E4

 <400> 2094

 tccccaacgg catccccct taactcccc tctccttctc ctccctgcgg tcccaactcc 60
 catacttcgg ttcaggaggg acgcaggcac gaaggcaggt tcgagggggg attgggtccg 120
 ctctgtctcc attgcgcgg atccggctcg ttcttgtgat ctgtctaccc gtttcttggg 180
 tcagtgtctg aagggtcaaac tggttggtga aacctcaccg ggggtgcttca acgaacgcga 240
 aagtgtcact gtcatttagc gcgtcttgat tggatttgac ctggtggcct ggtggcgtgt 300
 tgtccttgat tgagctcgag gatgactaaa tgggggctca gcagcggcac gcccgcgat 360
 tcct 364

<210> 2095
 <211> 264
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-E9

 <400> 2095

 actgcatcct tgctaatact ggtacgcagg ccgctcttgt cctctacaca ggagttcgct 60
 gcagccgtca cacactcagt ggctctgttc atcggcggtg gctacctctg gtgactaatt 120
 ttctaaggaa cggctctcta ttcctatact ctgaattcta tgccgagact agtagctaatt 180
 tctgcacact tcggcgcgat gtggatatac agctgcgcgt cgcttgatag gagggctctt 240
 atgggtgcgc gatgaatgat actt 264

<210> 2096
 <211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-F12

 <400> 2096

tacaacaccc tgaggtgagt cgtattaaat tccacgataa catcaaccac gtccagatct 60
gagtcacagca catggctcctc ttccgcaagt gcatggagcc cgtggagaaa tgccctcggcg 120
atgccaagat ggtcaagagc accgtggacg acgtggtgct cgtgggcggc tccacgcgca 180
tccccaaaggc gcagcagctg ctccaggacg tcttcaacgg caatgagctc tgcaagagca 240
tcaaccctga cgaggacgtg gactacgggtg ctgctgtcca ggccgccatc ctgagcggcg 300
acggcaacga taagggtgcac gacctgctcc ttctggacgt cacccggtgt ccctgggcct 360
ggagaacgcc ggcgggggtga tgaacgtgct ga 392

<210> 2097

<211> 186

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F2

<400> 2097

cacgattccg gaaacggggt accttttttt tcccacattt ataagcggca atacatgctt 60
gcacctgtag tattgtgacc atatgtactg tgctctcggc ttgtatatcg atagtagcat 120
ataaagctac tactcccgat ttgtaactat agatctcggc attaaagcca tttttattttt 180
attttt 186

<210> 2098

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F4

<400> 2098

gggcgaaccc ttggggcggc ccttggggca atggcggcca aggtgttcc cctcctccga 60
ctcaccatgg tcgccgtcgt cctggctgcc atcgccacat tattgtctcc ggaggaagcc 120
gatccgcggg cactgccggc acagtggacc accgcgaaga agtacaaggc cacgatggac 180
gccaagacgc ggcaggcttt cgacggcgtg gtggccgccc ctacggcaga gaagcggctc 240
caggcgggtg aggccgtgct gcagcagcag ctgaacatgg acgtgtccct gtccaaggcg 300
acgtcttccg gggacgagaa caactacgtg agcgtggccc ccgcctacga gaaggcccg 360

ggcgccgtca tcgcggcgac gccggacaac aagctccgcg ctatggcggt cgcgttcgac 420

gg 422

<210> 2099

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D12

<400> 2099

ctcgcggttc gatacaagac tctaaagtga cgtcatatga catcaatagt ccctaccatt 60

cggcgaacgt acaaatcaaa gtgcggcggtg cccgctcgca aactttgagt acgtactgct 120

actccgggtc gtctctctct cttctccatc gccgttggtt ctctcacgcc acacgggtcat 180

ccgatccctg tccaccgcgt tgggagcggc gcagcccatg gacgacaacg agagagagaa 240

agagaatgag aatgagaagg agaagcacta cgggactgac gtcgaggatg aagaagagga 300

cgaggaaggt aacaagcgag tcgtggtgct tggccccag gtccccctca aggagcagct 360

cgagctcgac aaggatgatg agagcctgag gaggtggaag gagcaactcc ttgggcaggt 420

cgacacagag cagctgggag aaactgcg 448

<210> 2100

<211> 407

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-D2

<400> 2100

aggtgaaggc tgtggatgcc ttcggcaacc tcttggtact tgaaaacctg caacaaccgc 60

accatgatga caacaacatg atgctaaaat ttccaaggc aagaaagttt gatatccaaa 120

aagcaaagca aatgtggtct gatatgctga agtgagagaa agagtccggt gcagatacca 180

ttctcgagga attcgaattc gaagaagctg ataagggtggc agaattgctac cctcaagggt 240

accatggggg tgataaggaa ggcaagcctg tctactttga acggcttgga cagatcgatg 300

tgaataagct aatgcangtc actacaatgg atcgctttgt caagaaccat gtcaangagt 360

tcgagaagaa ctttgctggt aagttcccag cttgctcaat cgccgcg 407

<210> 2101
 <211> 416
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-D7

 <400> 2101

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 cctcgctcct cgtcctcgcc gtgcgtcgcca ccgtgcctct actagtcccg gcggtgtgca 120
 tctcgcgga cgacaagtcc gagagcaagg ctgacgaata agctgctgct actaccgttg 180
 ccgccgacga gcatggctct gtcaagacca tgtccctcga cgcatacggg ccaactggaga 240
 tggccgcca gaagcccaag gagcaggtcc tgaacgcgca agctacgctg gcgacgaccg 300
 ctggcgctga cacatatgac cagaaacccg ttggtgaaaa acaggctgaa acggccacgg 360
 tctccgctgc cgatgaacaa cccgacaaat acgtggaagc tctagttcct gacgag 416

<210> 2102
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-C5

 <400> 2102

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 cattaaagtt caaggtcaat gaatcgtaca gctgcagata tatgctaggt agtaacaagg 120
 ctgatattca ctogaacaag ctattcaatt gtactgctga ggaaccttcg actggggagc 180
 ttttcaaaaag gatacttata ctgttttcag agatgtatgt gtcagaagat ttcagttcag 240
 ggcgaatgct tgtatatgtg gcagcaggtg ttgtgctggg catgctgagt tcgatgttca 300
 ttacggcctt attcagaggt atgtatgggt tgttgctcgc tgccgccagg tgggctgtga 360
 ggaagcattg catcagagta tttgccagcc ggttgaagcg tgccctgcctt cttgtcgcct 420
 atgtatccgc tgttggtctg a 441

<210> 2103
 <211> 434

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B2

 <400> 2103

 ggtc gatgca cgcctctaaa ataaatcgcc taattctttc gatcgaatta ggcgccttct 60
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 tggacggatt ggtaggcctc ttgaaagtcc ggggtggtgag gggcatcaac cttgcctacc 180
 gcgacgcaag atgcagcgat ccgtatgtcg tctacgact tggcaagaag aaacttaaga 240
 cgagcgtgaa gaagagatct gtgaacccca tctggcacga ggagctaact ctgaccgtca 300
 cagatcccag cctagctctg aagctggagg tgttcgacaa ggacacgttc agcaaggacg 360
 acccgatggg ggacgcggag atcgacgtgg cgccgctggt ggaggcggcg aacgcgagcc 420
 cggaggcgag cctg 434

<210> 2104
 <211> 255
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B4

 <400> 2104

 ttatgtggct cccgttaacg acagggccgc agggggccat caccatcgtc gggatggtgt 60
 catttgcgaa gatgatcaag ttcaaagtac aggagaactg cgagatgaat ctgggcccc 120
 aggcaacgag tctaaggaca cccgccaaag attagaccag ctgttgcaac ccgatcaccg 180
 gcgtctcgca gctgattata tctcctggc caaggtgcgc tcaaagtga ttcgcaaac 240
 tcgttcatgt gccag 255

<210> 2105
 <211> 330
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B9

 <400> 2105

 tacaaccccc tgacgtgagt cgtattacgt cagacttcgt cgccatctca aatggacatg 60

ttctctgggc tcaatctttc atatgtatga cgaggctgca tcttcgtcac cagcactcgg 120
ggcggatttg ggtgacatgg actctcatcg ggaagaatca ccacgtccat ttgacatagg 180
atctgcctcc gacgttgatg ccaacgacac gttaatagtt ctgccatcac tgcaacatgc 240
ataactacat caacgcattc tcaaagttct actctgagac ctctaacaca ccaatcgatt 300
tctgtacatt ccacaatttc atatatacct 330

<210> 2106
<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C2

<400> 2106

gtcgatgcac cactctaaat tgagtcgtat aaaaccctca aagccgaagg cctcgtgcct 60
tctcttcttc cctggcatgg aggaagtacc tgtttcgctt atgatcgttg ccgccgtagt 120
gctggacaac aatggcgccg acgcggtctc ctgcactgcc atccctagcg taacaataag 180
cctagaggag aaagaaaata tcaatgggga tgttccacg atcacctcgg ccgcaagcaa 240
cgaggaggag gcgttggtca gtgtcggaga atccaccaag gacgatggcc atcgcttgac 300
gatggaatgc accactcccg tctctccag tagcccttcc actcgcaaga agcgcggggc 360
gttcagcctc ttcagggcga tgttctgtc cttcgcccg agcgacgaca gcatgaagaa 420
gacagacgac gacaccacga gcc 443

<210> 2107
<211> 293
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C3

<400> 2107

ttcaaaaacg cttctctctg tggttactcc gcgcgccttc tctttctctc ccggacttca 60
atcgtgttct tcagcacggg ctagctagct cctccctcc cagccatggc gacgccggac 120
aacaaggggc acgggcatcc gctgcccaag tttggggagt gggacgtgaa gaatccggcc 180
acgtccgagg gcttcaccgt catattccat aacgcccgcg acgacaagaa gaccaccacc 240

ggccctgggg ctgggaacgc gcgcgcatgc attccgccgg ccttcaggaa cgg 293

<210> 2108
<211> 303
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A1

<400> 2108

tgcacctctc taaattgggt cgtattttaga tttgaaccgc ctttgtaggc gtcgggtggc 60
gatcgacgat tctgatactg ctaggtccta ttcagttggt tccatctcgt cgtcagtcgt 120
ctgcccgggtc acgtcgtgga tcggacggaa caagtcggtg tgcagttgca tcatgaccgt 180
ataccttaac actttgacgc tcggcacggt catctgcacc gtgttagaga tgcaggggat 240
acggagcatc tctgcaggat actagactag caacgtctac tcatgttaca tagccagttt 300
ccc 303

<210> 2109
<211> 426
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A3

<400> 2109

ccgggatcca ctcaaacgac gcattctgcca acgcgtccgc ccacgcgtcc gatcgccatt 60
acagaagaag ccgagtggac cctcaccgac gctaataaag aagggcggag gtgaaggaag 120
gaagactcca aatggtaaaa caggaaccaa gaagtaagca atccagatga aacttggttt 180
tgctgtgacc aacttcacct tggtttagga cagataaaca tgttgatact atcgggtgat 240
acattgatat ttgccacacg aatacgtcag tcctcttaag ggaggaggtc gctagatctt 300
cgggcatctg ctgtaaata ctcgttgatt tgtttagta cgaacagaaa acggaccaca 360
aaaaactcga ggatgggagg aagatcatca tcacaaggac gtttttggtta gatgtatatg 420
ttgctt 426

<210> 2110
<211> 425

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B1

 <400> 2110

 cagctcctca atccatcaat tgcaagagga gcaagatacc accaccgtag caccacacgc 60
 aggtacgaag aacgcgacga acatggcgag gctggccttg gtagcggcgg tggttctgtg 120
 cctcctgtta gcgacagggc cgcagggggc catcagcgcc gaggggatgg tgtcatttga 180
 caatttgatc agctgcaagg tactgggcaa ctgcgacaag aacctggggc ccgaggcctc 240
 ccgcccaggg aaacccgcca acgactacac ccgcggctgc aacccgatca ccggctgtcg 300
 cggctgatca tatctctctg gtcgatgtgc gcgcaatgtc aatgtcgcac gcgcgtgcag 360
 gtaccaggcc tcagcgtgtg gtgccgcgtg tgtgtatata ttacacacat gcattataca 420
 ttggt 425

<210> 2111
 <211> 434
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-G10

 <400> 2111

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 gcgcccgggt cgaggagctg aacatggacc tcttccgcaa gtgcatggag cccgtggaga 120
 aatgcctccg cgatgccaa atggacaaga gcaccgtgca cgacgtgggt ctcgtgggcy 180
 gctccacgcy catccccaag gtgcagcagc tgcctcagga cttcttcaac ggcaaggagc 240
 tctgcaagag catcaaccct gacgaggccg tggcgtaagg tgctgctgtc caggccgcca 300
 tcctgagcgg cgagggcaac gagaagggtc aggacctgct ccttctggac gtcacccgc 360
 tgtccctggg cctggagact gccggcggcg tgatgaccgt gctgattcct cgcaacaaca 420
 acattacaac gaag 434

<210> 2112
 <211> 206
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G11

<400> 2112

gggtccacgc acgcgtccga attcattttc accgggaaga tttgtaactg tcctcctccc 60
tccttgtaag ttgctcctgt aaactcttcc tgaattcatg gcgtgctggt gtagcaatca 120
ccacttcttc cctgtgaatg cccacagcgt gtcttggtaa aagcatgtat gtatgaatat 180
tggagtatat gttactactc agctcc 206

<210> 2113

<211> 203

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G2

<400> 2113

tgagacgtat tatctcgaat ctccacttaa ctcatcgcga cctctctccg gccatcctcg 60
ctgccgtctc catctccttc ggccactagg ctacgaaccc ctccgggacc agggaccgta 120
tgccgtatct ctggcacgtc ttctcgccgc ctccgggacc tctcgtaata tcaatctccc 180
tgcacctgga acgccgctcc agc 203

<210> 2114

<211> 272

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G4

<400> 2114

tgagacgtat tatctccagt ctcgatggaa ctcagatgcg ccgcgctccg gccatacgcg 60
ctgccgtcgg cgtcaccggt ggccgccagg gtcgcgagca ggagggggcc aggcactgtg 120
acctgcgtct cgagcggggg gttccccgaa gacgggcacc tcatgtacta cgaggcggcc 180
ccccggttga acgcagtggg gcccggtgct acggaccttg gaaagctcca ggccatgggg 240
ctcgtccccg gccgaccagt caaggagaac gt 272

<210> 2115

<211> 416

<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G9

<400> 2115

gtcgatacac gaatctaaat tgcctcgtat cacagggggg acaggaaatc agcggccatg 60
gcctcgattc cggcgacgac cttcgccgtc atcttatccg tcctcttctg tgccgcggct 120
ggcaccgccg tcgacaacga cctccccgac tacgtcatcc agggccgcgt ctattgcgac 180
acctgccgcg ccgggttcgt gaccaatgtc accgagtaca tcgcggggcg caaggtgagg 240
ctggagtgca agcacttcgg caccggcaag ctcgagcgct ccatcgacgg ggtgaccgac 300
gggaacggca cgtacacgat cgagctcaag gacagccacg aggaggacat ctgcgaggtg 360
gtcttggtgg agagcccgcg caaggactgc gaccaggtgc atgcggacag ggaccg 416

<210> 2116
<211> 376
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H11

<400> 2116

gggtccagca cgcgtccgaa agatagcatg cacaacaat gcgatgagag ccttggtcct 60
cctggtcctc ttctgcatcg tgcattggtga gaaggaagag tcaaagggca tcgatgcgaa 120
agcgtccggg cctgggtgggt ccttcgacat caccaagttg ggcgccctccg gcaatggcaa 180
gacagacagc acgaaggctg tgcaggaggc atgggcatcg gcgtgcggcg gcactgggaa 240
gcagacaatc ctcatacca agggcgactt ccttgtcgga caactcaact tcacaggccc 300
ttgcaagggc gacgtgacca tccaggtgga tggcaatctg ctggcgacca cggacctaag 360
ccagtacaag gaccat 376

<210> 2117
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H12

<400> 2117

cgtcgtcgtg ggccttcatt tctcctagaa ggtacaaggt cgagaggaga agaaggcgag 60
 acgtgcagtc cgtcggggcac cgatcgagaa cagggaagca agaggctgct agagatcgag 120
 ctcatcaacc aaccaagtcg tacgtcgtca gcatcacgac cggatggcgc gtgccgcgtc 180
 cagctatgta tccaggaggg ggctctccgc agcgatgacg gtggcggagg agtccgtgaa 240
 gaaagtggac gacaaggcgg tgaagctggg aactgtggcc atggacatcg ccagcgcgat 300
 ggccaccacg actgatgaga agacggcggt cagggaacct gaacccgaga ccggatacta 360
 cggtcgggtc accggcacga atgaggtgga cgccgccgac ctgc 404

<210> 2118
 <211> 225
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-H2

<400> 2118
 acggaccggt ccgcactcac accgccttca cgctccctc accaaataag gtccccccct 60
 tttccgacat tcacaggggg gacaggaaat cagcggccat ggcctcgatt ccggcgacga 120
 ccttcgccgt catcttatcc gtctcttct gtgccgcggc tgggaccgcc gtcganacaac 180
 gactccccga ctacgtcatc caaggccgcg tctattgcga cacct 225

<210> 2119
 <211> 180
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-H4

<400> 2119
 tccacgcgtc agaaacgcgc ggtccggtga tcggtgtggc cgggtggccc gatgagtcag 60
 ttagagagcg agcttttttt ttgatacggg ggagttaaaa aatccaaaaa tcttggtgta 120
 tgtacagttc tgtctatgag aaatactaac gcgtcttgca gtgctgctgc ctgctgcctc 180

<210> 2120
 <211> 136
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E4

<400> 2120

tattaacatt ttgccctcct ccaactttct cattttcttg caatagcatg tcactgttcg 60
tcatgatagc acctcaagta tgcatttatg tcatatcagt gagtcttggg gcctgtaata 120
tcagctgcac aatctt 136

<210> 2121

<211> 258

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E9

<400> 2121

gggtcccagc acgcgtccga atgaagatga tgactccacc aactgaggcc acacatgtcg 60
gcccgggttaa atttggaaca agacatggaa gaaaaatgag agcaatgtct ttaaaccat 120
gaatccataa taatgtgtgg tcatccatgg atacatcctt gctctccctc tttttctttc 180
tgtttgattt tcaatgtgtt atcatgttgt tagttaactg tatcgactca tggatatcaag 240
gtctaaaaaa ttatcgtc 258

<210> 2122

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F5

<400> 2122

accacgcgc tccgaccatg acgtcgtact taacgcgtgg gcgagacgcg tggagggtcg 60
aggaggcaag ctgtgtcagc gcacgcagca gatagggtcg gcgtgacgac catcaggtga 120
ctcgtcgtag gaggggcttc gaggattgag gaggcagatc gccctcatgt acggatagtt 180
ttaatggact aaaactcagt tctcacaaca cagtgatcag ttgtagggtcg aggccatggc 240
atttaatgtt gttgcatagt agcttgcagc cacaggcaca gtgggtggcg ttgtgcctgg 300
atcaatgact tccttggcgt aggaatgaat gcagtg 336

<210> 2123
 <211> 225
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D10

<400> 2123

ggctcgagccc gcgtccgaca cgagtccgcg caccagtgcc gacagcgaca gcatctcgct 60
 cattctcggc catcaagttc tggatcgaca acatctccat gtccaaatgc aaagacagcg 120
 tcatcgacgt catgcagacc tccactggga tcatcatctc catctgccac ttcagcaacc 180
 acagcaacgt catgctcttc agcaccagcg attcctgggc ggaag 225

<210> 2124
 <211> 431
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D12

<400> 2124

gggtcgagca cgcgtccgcc cagcagctcc gcccacgcgt ccggcgcgac cagcagcagc 60
 cgcaggacgc gcattgccgc tccgaggcgc tgggtgcagca ggtggccgcc gcggccccggg 120
 agggccggctt gggcctggcc ggcaagaagg cgttgccgcg ctacgacgac acggcgcacg 180
 accagttggt ggccactgcc gccgacaggg ccgccgagga ccgcatggtg gccttcacgt 240
 acctgcgcat ggggccccgac ctgttccagc ccgacaactg gcgccgcttc gccgcgttcg 300
 tcaagcgcac gacggacccg ggcgcgcggg aggcttgccg ggagcaggtg gaccgggagg 360
 ccgagggcgt cgcgcaggcc acccagcccc tcgtgcacga ggccgccgtc gcgctcatca 420
 actgaccgga c 431

<210> 2125
 <211> 351
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E12

<400> 2125

ggggtcccagc acgcgtccga aaagtatcac atgatcatca tttcttccctc aaagaatgtc 60
 tgccttttct ggccctcggca caatttcaca agcatcaata gtaatgcaaa tccataatac 120
 catgttgaca actcaagcag tcatgcttac aagacaaggg aacttgggaa gttcctggga 180
 attttaacct tatatacaaa gatgaagaca agaatgatgg gcaaatttcc aaagtttaat 240
 aatgatttaa ccttgaagga cattccttta caagggtccga gtttcacttg ggcaaactctg 300
 caagctgatt cgggtgttggg aaagcttgac agtttagtgga gaacaactgt t 351

<210> 2126
 <211> 370
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B9

<400> 2126

gtccaagcaa gggaggaagg ggcagctcgc gatcgacgcc gagatcttcg aggtgacacc 60
 ggccctttcac gtcgtcgagg tgaagaagtc ggcaggcgac acgctggagt atgagatggt 120
 ctgcagcaag ggcctaagac cttcactcag cgacatctgc tggagcagcc gatctgagga 180
 gaacatggct ccttcagtgg ttcagccatc ataattgaag ccacacctctt agaccgtctc 240
 cagcacttta tccatatggt cteccccctct tagtcgattg ttattttaagt gcagcctctt 300
 cggagatgca attacaatcc atcctctctt tctttttccc tttctcaaag agctaagacc 360
 ttgctcgact 370

<210> 2127
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C4

<400> 2127

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 ctcttggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg catcgatgcg 120
 aaagcgtccg ggccctggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180
 aagacagaca gcacgaaagc tgtgcaggat gcatgggcat cggcgtgccg gaggactgtg 240

aagcagacaa tctcaatac caagggcgaa ttccttttcc gacaactcaa cttcacacgg 300
 ccttgcaaag gcgacgtgaa catccaagtt gattgcaatc tgctggcgac cacggaccta 360
 agccagtaca acgaccatgg t 381

<210> 2128
 <211> 432
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H8

<400> 2128

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 ggccgcgagg cagggcaacg gctgttccag cgtgatgatg accctggccc cgtgcatgga 120
 cttcatctcc agcaaggcgt cggagccggg gatctcctgc tgctcggtgc tggccggagt 180
 cgtgcagacc gacccccgct gcctctgcat ggtactggac ggcaactgcca cgtccttcgg 240
 catcgccatc aaccagacca gggcgctgga gctccccggc gtctgcaagg tcaaggcgcc 300
 gccgctcagc cagtgcacag gcgtccctgc ggcacctgca ccgacgcctc ccgacgagcc 360
 agcagcggca gctgaggaag aagccgacgc agctgcagat gcccttcag cagatggagc 420
 ctcaagctcc ac 432

<210> 2129
 <211> 158
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A2

<400> 2129

attctaggtc gaccgacccg tccgcaacag gatggcatgc acaaacaatg cgatgagagc 60
 cttgttcctc ctggtcctct tctgcatcgt gcatggtgag aaggaagagt caaagggcat 120
 cgatgcgaaa gcgtccgggc ctggtgggtc cttccaca 158

<210> 2130
 <211> 442
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-043-Q1-E1-A3

<400> 2130

gtccagggac gcgtcagacc acgcatccga tctgggttctc agtgaaacac tctgcacttg 60
aaaggaccga tgcaaagtga aagattaagg tatgtgctca tgctgtgcta atgaaagcct 120
taaattcagt gttttgtttt ttttctggtg gcgtactgtc actgttgact ggccctacgga 180
tctgagtttt tgtgtaattg tttggaagca attccattgt cgccgaaatg gcgcggtagt 240
ttctctgact gctgctgcta aatactagga acttttagttt tcttcaagtc caaagggtca 300
gagttgagag cacctgagat cgggcgatgc ttcatggcca cggccccca gaggtatttc 360
gcaatagttg actctaaatt tctctctata tctcagtttt ttgtgtcaca ttatcaacat 420
ttcatacctt aactttttta ng 442

<210> 2131
<211> 321
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A4

<400> 2131

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goggcgagcg aacattctga tactgctagg tcctattcag ttggttcctt ctcgctcgta 120
gccgtctgcc ctgtgactcg tcggctggac tgagcaggtg cgtttgcagt tgcagcctta 180
ccatatagct tataactttg tggttaagtta gcatactgc atgctgtaac agacatggag 240
gatatagtg agctctgcag gataatagag tggtaatgcc cactcaggtg acctaaagaca 300
ttgcaagggc gacgtgacca t 321

<210> 2132
<211> 306
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A6

<400> 2132

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gccatggcgt tctgtggct cgagttctcg cagtcgttcc aggtgctggc aatcctcgcg 120
 tccacgcgca cgcgcgccgt cgcgctcggc tacaggttct gggtcggcgc ggggctcccc 180
 gccaggggag ccgcccacgt cgcgcgcggc tgccagctgg gcctcctcgg gtgcaagctc 240
 gcgtgccatg tcggcgctct gtggatgcat cttgggtccc tcggcggggg ttgcagcggc 300
 atgcgg 306

<210> 2133
 <211> 324
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B1

<400> 2133

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 ggcaaaacac cttcgccggc gagagcatgg cgatggcgta ccgtgtcctg gaggtcaccc 120
 tgggtgtcggc aaatgacctc aagaaagtgt cgctcttctc ccggactcgc atctacgccg 180
 tggtttccat ctccgattc gacctcgca tcccttccca cagcacccaa gcagaccaca 240
 gcaacggctg caaccctgc tggaacgccg tggtagactt ccccatcccg gctgccgctg 300
 acaccgcggc cctcgcactc cacg 324

<210> 2134
 <211> 205
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G10

<400> 2134

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 ctcagagttt tccgttgccg tgaccatctt cggcgggcgt ggccatgccg ggacatgggg 120
 aaaggcactt ggtgcagagg tctatgactg caacaacatg gtggagcagg agctgcctgg 180
 aggcgggctc ctcgtgtacc agagc 205

<210> 2135
 <211> 182

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-042-Q1-E1-G12
 <400> 2135
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 ccactacggc cagatcaaca tcacccgcac catcaagctc gccatgggccc gcggcaagggt 120
 ggacggcaag gagcgggttcg gcttcaacgg cgtgtcgacac gtcgaccccg agacccccgt 180
 ca 182

<210> 2136
 <211> 418
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-042-Q1-E1-G4
 <400> 2136
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 aggttgcgat ggctgtggtg ttggtgttct tggtagcggc cgcattggtgc ggtcctccca 120
 aagtcccccc aggcaagaac atcacggcca cctatggcaa ggactggctg gacgctaaag 180
 cgacatggta tggcaagccg acgggtgccg gtcccgacga caacgggtgtt ggctgcgggt 240
 acaaggacgt gaacaagccc cccttcaata gcatggggcg atgcggcaac atccccatct 300
 tcaaggatgg tctgggttgt gggctctgct tcgagatcaa gtgcgataag cctgtggagt 360
 gctccggcaa gcccgtggtg gtgcacatca cggacatgaa ctatgagcct atcgcggc 418

<210> 2137
 <211> 432
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-042-Q1-E1-G6
 <400> 2137
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 tatcagtatc aacagtgcag aatttcctta gagttgcaat aattatatcc ccaatagctc 120
 aattgaagca atttaagcaa caaggacaat ggggagccgg acgtttccat aaccataata 180

acaagggttaa ccttgtatag taagaattga acctttggat ctaacaacaa acaacacatc 240
 caccggatga ggaaggattt cacctttgag gccaatcctc acaccgcgga aggttcctcg 300
 acgtccctcc cccgtccgcc gccaacgcca ccgagcctgg gcacatcgag gcctccaccg 360
 attccgtcgg gcatgaacga ggcaggtcga ttctcgatga cctcgtcgat gaggccccag 420
 tcgcgcgcct ct 432

<210> 2138
 <211> 210
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-042-Q1-E1-H10

<400> 2138
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 ccgggectgg tgggtccttc gacatcacca agttggggcg ctccggcaat ggcaagacag 180
 acagcacgaa ggctgtgcan gaggcattgt 210

<210> 2139
 <211> 194
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H12

<400> 2139
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 ggagtacggg gagttcttca tgagctggta ctgcgagatg ctctggagc acggcgagcg 120
 catcctgtcg gcggcgacgg gcgtgttcac ggggtcccc ggctgaaga tctcggtgaa 180
 ggtggccggg atcc 194

<210> 2140
 <211> 307
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H4

<400> 2140

ccttaacatc aaaaggccaa cctacaccaa cttgaacaag ctgatctcac agatcatatc 60
atctctaacc acctccctga agtttgatgg tgctatcaat gtggatgtca ccgagttcca 120
gaccaacctt gttccatacc cacgtataca tttcatgctt tctcatatg cccctgtaat 180
ctctgctgag aaggcttacc atgagcagct ctctgttctt gaaatcacca atgccgtctt 240
tgagccctca agcatgatgg ccaagtgtga cccaaggcat gggaagtaca tggcttgctg 300
cttgatg 307

<210> 2141

<211> 202

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D9

<400> 2141

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cagtcagttt ggtgtaggca ccatcagagc cctgtgaaaa atagaagcac tcacgcatgg 120
tagcagcttg ttattgttgt tagctgctga cgctttgagg catgtcaaca agtagagatg 180
gattgcaaat cctaataaat gt 202

<210> 2142

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E3

<400> 2142

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ctaccaacca acctagaaa gctagacacc gtacccatgg ctccgcgctag cgtcgtcttt 120
gtcattgctg ctctcctctt cgtcgccatg gtcgtagcac cgatggccga ggcaaagtct 180
gccgatgcc ctgtggctga cgcgccggcc gatggaccta gcgggcgccc tgctgcacct 240
ggcccccagg gtgtcgaagg cctgtcaggc aatgaggatg acgatgatga ctccatgatt 300

tgaggccaca catgtctgca cggttaaatt tggaacaaga catggaagaa caatgatagc 360
aatgtc 366

<210> 2143
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E6

<400> 2143

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aacagccagc tcgcgaaaat aatgaagagc cgcagcatgg catcatcggc cgcgctcttg 120
gtgctagccc tcgcgctagt ggcgccacc gccccacagg tagcggaggc aaagaagaag 180
agagcggcgg agagcggcga ggcgggcgag gcgaagaaga tccaggacga cttctgctcg 240
acgctgtgcg agggcaagaa ggggacggac ctggtcgtgt gcaaggagtc ctgcgcgctc 300
tcccagcagt ccaacctggt gctgtacggc aggatccagt gcaagggcaa gtgcaccgag 360
cagaagggca tcacggcgcc ggccatgaag gtctgccagg aggagtgcga caag 414

<210> 2144
<211> 211
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-E9

<400> 2144

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ctggacgtgc acgtcggcca ctgcctctcc gtgctggctg acgccgacca ggcgcccggc 120
gactactaca tgggtggcctc cacgcggttc atccacgacg ccaagtccgc ctccgccgtc 180
atccgctacg ccggctccag cggcgccccg c 211

<210> 2145
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-F2

<400> 2145

tcgtgggtcg atacaagcct ctacagggac tcctgctatg cctcgcgcg cgccgccggc 60

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atccatagcc tcgttgaggg aggcgccaac atccagggtc tcctcgacga cgccagcgtc 180

accctcggtt ccggacccgg cctcgggcgt atcggggggg caagctttgg ggattacttc 240

gtcggcccag gcctcgaaca actcatcgag cagctcgccg agaacgaccc caaccgctat 300

ggcacgccgc cggctgccaa atcgggccctc tcctcgctcc ccgacgtcct cgtgactcat 360

gccatggtcg cagctgcgga gggcgctgag tgcgccgtct gcaaggaggg attctcgctt 420

ggaga 425

<210> 2146

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C1

<400> 2146

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gctcgttccg tctccctcgt cgtggcgccc cttctcctcc tctccctcct cgtctccgcc 120

gcggccagtg cgcggaccgt gggcgacacc gtgcaggacg cgtgcagcaa gaccagttc 180

cccaagatct gcgtggacag cctcgccgcc aagccggaga gccagaaggc gacgccgcgc 240

aagctggcgg agctgttcgt gaacatcgcg gccgagaaag gatgcgggat ggccaccttc 300

gtgcaccgca agtacagcga caatgaggac agcgacatat tcaagtgcta cgacagctgc 360

tccgacgacg tgg 373

<210> 2147

<211> 216

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C10

<400> 2147

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ggagcgggag gccgagggcg tcgcgacgc caccagccc ctctgcacg aggcgccgt 120
 cgcgctcacc aactgaccgg accggccggc gttccccgtc gactgtgttc gatcgctaga 180
 cgggggtggca cgctgcgatg actacctgta tggcga 216

<210> 2148
 <211> 223
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-C11

<400> 2148

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 tggctccga ggaacacccc gtctctctca ctgaggcgcc cctgaacca aaggctaacc 120
 gtgagaagat gaccagatc atgttcgaga cttcaacac ccccgctatg tacgtcgcca 180
 tccaggccgt cctgtctctg tatgccagtg gtcgtaccac agg 223

<210> 2149
 <211> 148
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-D2

<400> 2149

gacaaggact acgttgtcaa ggccgctgag gtcaccaagg cctgcaacac cacctgcgcc 60
 aaggagaagc agcctctgct cagcgagaac tgcaggaggt cctggcacc tctctcttcc 120
 tgaacgcaaa gcacgccgc cggtcgtc 148

<210> 2150
 <211> 397
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-A3

<400> 2150

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 cggcccatgg acaaccagca gaactcgggtg accgcgcacg gccgcacgga cccaacatg 120

aagtcggggc tcgtcatcca gaactgccgc ctgggtgccg accagaagct cgtccccgac 180
cgcttcaaga tccccata cctggggcga ccctggaagg agttctcgcg cctcgtcata 240
atggagagca ccatacgcca ctcatcaag cccgaaggct acatgccctg gaacggcgac 300
ttcggcatca atacgtctta ctacgccgag ttcaacaacc gcggccccgg cgccggcacc 360
agcaagaggg tcacctggcc tgggttccac gtcacgt 397

<210> 2151
<211> 354
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-042-Q1-E1-B4
<400> 2151

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ccgccttcac gcctccctca ccaaataatag tcgcgccctt taccgacatt cacagggggg 120
acaggaaatc aaccgtcatg tcctcgatct cagcgacgac cttcacggtc atcttatacg 180
tcacatcttg tgccacagcg ggcacagccg tcaacttgta cctcctcgac tacgtcatca 240
atagccccct cgactgcgac acctgccacg ccccgttctc gaccaatgtc atcgaatata 300
tcacgggtctc caaagttcgg ctggacttca cacagttcgg taacgacaag ctcg 354

<210> 2152
<211> 373
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-042-Q1-E1-B7
<400> 2152

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cgcatgacgg agccggggcg gcggggaggc tgccgggagc aggtggagcg ggaggccgag 120
ggcgtcgcg acgcgaccca gcccctcgtg cagcaggccg ccgtcgcgct caccaactga 180
ccggaccggc cggcgttccc cgtcgactgt gttcgatcgc tagacggggg ggcacgctgc 240
gatgactacc tgtatggcga gtccctatac ttactcatac atgagctgcg ccgccgtgtc 300
gtcgggtcgt gcaccgcgca gtagtgtgcg tacagcggag agctgcgacg gctagcgagg 360

tacggtggtg ggt

373

<210> 2153

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-G6

<400> 2153

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gccaaagctt gccatggcag ccgtccggtc cgacagggtc caccaccacc accgccgctc 120

cgaggcgctcg tgcccggcaa cctccgcggc cgtggcggcg gcgagggccg atgacgccct 180

gcgccagcgc ccgcgggggc tcgtgcaggt ccgggagcgg gatcagggcc cgctgtcgac 240

ggggcaccag cacctgcacc accatcacca ccagctgcgg cggtcggcgg cgttcccacc 300

ccgccgcccg gggccggggc gccgccctcc tcagcgctgc gaaagcgacc tcaacatcag 360

ggagcaccgc tcctgcagcg aggtggccgg cggcaccgcg gcgggctgcg ccgctgtgtg 420

ctgctg 426

<210> 2154

<211> 297

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-G7

<400> 2154

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gtgataggta gacatgatat gttacttcgc tggcgaaagt ttcatgagt cagcgctatt 120

tggaggggat tttaacattc attctttggt gtagagccat tcgtcttatt attacatcat 180

ttaattcatt cttggtaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaagaaaaa aaaaaaaaaa aaataaaaga aaaaaaaagg ggggcagccc aagaggt 297

<210> 2155

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H10

<400> 2155

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ctggtgaagg aaccgacca gattgccatc cggtagctga agaacgactt catcaacgac 120
ctggcaacca tgctcccgat accgcaaagt atcaaccggg ttgttaaacc aactgtgaat 180
acatcctccg gcaatcaca caacaacaac agctctcca agattgtgcc gattcaattc 240
ataccaagaa tccaacccaa aataaccctt aactccaaaa ttgttcaagg caattgaatt 300
ggtaacaaaa attgcctggg cgggggaggc ttaaaa 336

<210> 2156

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H11

<400> 2156

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gtaggcagtg ccatttcgaa gacaatattg caaaatttaa ctaacttga tttacagtgc 120
gtttggttgg aagtaaaaat aataaactgg attgtaatac caactataaa taaaatcaca 180
gaaaaatcac aacaccaaca aaaaaactct caatgatcgt gctgatcaaa tacataccaa 240
gagtcaatct aataatatcc ttgaactcaa agatagtcgg ggcaacctcc agtggtgacc 300
agataagcct gcgcgagggc ggagtacaac ctgcttctct acacgctggc aatccatgtc 360
ctcggtgctc tctgaa 376

<210> 2157

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H12

<400> 2157

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tgtgattttt gcgggcaacc ctggtcaaaa gaaagctaag gtctcagaac taccaaaatt 120

tggaaaaccg gcaaaactgc ggagttcctc gtggtggaca aaatactttg tccaaactgg 180
 cttaacagag aacgaacggc cactgaagaa atttgaagag gctacatccc agaacatata 240
 ccaaccagat tgtcagatct tccacttaag ttcgccaagg tgatgcgcat ccagaacacc 300
 ttgggttgtt gtcagttgtc acatcagttc tgtaagcagc acctttgctt acccctgttg 360

<210> 2158

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H4

<400> 2158

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 agcaggcgga ggcgatcacc tccgccatca cggaggtcct caacgacagc ctcgagagca 120
 tctccgagtc cttcgtctcc aaggccgaga tgcagaagag tgagatgctg caggagtcca 180
 atatctccaa gttcaagtcc caagtgcaga gtcgcagga aaaccatttc tctttactac 240
 agcgggagac tgagaaaactt cgcggagata ttgataagat gaggagtga ctgaagtatg 300
 agatcgacaa ggtcaccgca ggacagcgat tggatctgaa tcttgaaaga gggcgcatat 360
 gtgatgagct tgccaagcag aatgaggaaa cactgagct taccacaaag 410

<210> 2159

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H7

<400> 2159

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 tcggcctttt gtcaggcat ccacaggggg gattgggaaa acatttgcg gcatccggcg 120
 gcaataatgg catcggttcc ggctccggcg acgacgactg ccgccctaata catatgacta 180
 tgcgtcctcc tctcctgtgc cgcagcctga gtacctaaag ctcctcgact acgtcatcca 240
 gggcctcgtg tactgcgaca cctgccgcgc cgggttcgtg accaacgtca ccgactagat 300
 cgcgggcgcc agcgtgatgc tggagtgcg gcacttcggc accggcaagc tcgagcgagc 360

catcgacggc gtcaccgacg cgaccggcac ctacac

396

<210> 2160

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-H8

<400> 2160

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cgccgcatcc accgatggag atgaagaaga tcgctgcgc cgtcctcgtc gccgcctcgg 120

ccaccgtggc gctggacgcg gagggcccg ctccgtctcc caccagcggc tctccgcgg 180

tcgcaccgc catcgtcagg gccgccgtgg cctccttctt cgcgtactac attcactgag 240

ccgccggacg atgagcctga tccggaggga agagaccaat gtgggggggag agacttggct 300

gcgctgcgct gctctgctgc tcacgcgc atcgcgatgcg tgggcgtgct ctgattgggc 360

acagctgtgg cagtggcaca ccttcggcct 390

<210> 2161

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-E5

<400> 2161

caggacctgg actcgcgga tcgacacacg cctccacaat gcgtcgaacg acggggtgtt 60

ggacgccatg gcggtgttgc ggatgcaggt ggacgcgttc aacaagcgca ccgaggcggc 120

gagggcgcac gtcaaggagg ccgccgtgac ggcgtcccc aaggcgcgga cgggtgctgga 180

cctgtgcaac aacctgtacc tggacgtgga ggacaacctg ggagcctgcc gccgcgccat 240

cggttcaag gacgccgtca ccatccgcgc caccatgggc atggcggcgc aggacatgca 300

gaactgcgac gagcagttca ggcagatcgg cgagaagaac cccatggagc agttcgacgc 360

gtcgtcgtc gagatgtccg agaactgccg ctcgctctcc aacatgatct gatcg 415

<210> 2162

<211> 139

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-E6

<400> 2162

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caagaagcgc accgaggcgg cgagggcgca cgtcaaggag gccgcggtga ccgcctcccg 120
gagggcgtga accgtgctg 139

<210> 2163

<211> 329

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-F1

<400> 2163

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gcattccgat gcgtgggcat gtttttgatt cgacacacct tttgtcctct ttttctttgt 120
tccctctttc tccttaattt aacgaattga tgcattgccgc tgatgttctt ccccttgaga 180
gagggattaa cacttgatc atcgcttgcc atttgtttga atccattcaa caattcgatt 240
tataaaaaaa gaaataaaaa aaaacaaagt aaagcaaaag tgaaaacact tcaacaagat 300
gaattctcga acggtccacc gaaggggtg 329

<210> 2164

<211> 306

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-F12

<400> 2164

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gaacaagcca accgaccccg tccccaaggc aatccgtcgc cgacgtacca ccgccaccgc 120
aggagcgaga tggagatgaa gaggatcctc ttcgccgtcc tcgtcgtcat cgcgcctcg 180
gccaccgcag tgctggcctc caccgaggcc gccgcgcggy gcgcccacac tgccctccgag 240
tcgtccgccg aggtcctgc tggcgtggc gctggcgctg ccgcgcgcgc tgtegtgctg 300

gggccc

306

<210> 2165
<211> 180
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-G11

<400> 2165

tgcgcgacaca gaacgtcaac ccgtacgcag acgcagacgc tgacaccgcc cagccaacg 60
ctaacgceaa cgccaacgcc agcgccagcc ttccggagcc gccactcctc tacgacgtcg 120
gaaacccgctc cgcgttgacac tccagcatatc cgtcactgtc acaaacagcc tcgactctc 180

<210> 2166
<211> 386
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-041-Q1-E1-G12

<400> 2166

gtgggtcgat acaagactct aactgacgt cctgattacg cgtccgccc cgcgtccgct 60
cggcgggcggg gttcaaaaac tgccatcatca tcacccggcg gcccatggac aaccaccaga 120
actcgggtgac ggcgcacggg cgcaccgacc ccaacatgaa gtccggggctc gtcacatcaaga 180
actgccgcct ggtgcccgcac aagaagctgt tcccgaccg cttcaagatc ccctcgtacc 240
tgngccgccc ctggaaggag ttctcgcgcc tcgtcatcat ggagagcacc atcgccgact 300
tcgtcaagcc agaagggtag atgccctgga acggcgactt cgccctcaag acgctctact 360
acgccgagta caacaaccgc gggccc 386

<210> 2167
<211> 281
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-041-Q1-E1-G2

<400> 2167

ggggggggng gggngggggg ggnngggggg gggggggggg ggnngggggg gggggggggg 60
 gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 120
 gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 180
 gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 240
 gggggggggg gggggggggg ggggggnggg gggggggggg g 281

<210> 2168
 <211> 267
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-D1

<400> 2168

aggagacggc gcggcgcctg ggcattggga gcaacatgta cccgtccacc accctgctgg 60
 gcgacaacaa gaccggcgag atgggcggcc tgaacatcga cgagctgac gagaaggccg 120
 acgggttcgc gggggtgttc ccggagcaca agtacgagat cgtgaagcgg ctgcaggacc 180
 ggaagcacat ctgcggcatg accggggacg gcgtgaacga cgcgccggcg ctgaagaagg 240
 cggacatcgg catcgcggtg gacgacg 267

<210> 2169
 <211> 333
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-D10

<400> 2169

gtcgtattag ataccggcat ggagctctgg atgtggaaca ttagcgaatg gcagcgttcc 60
 tatcaatgga caatcttccc gaacacactg ttgctggact tcgtggcgaa tgcccaaate 120
 cgcaggatct cactgcggag tagcaggttc ttcgacatga acatcttctc gagcaagaac 180
 gtgggtgatgt acaatgtgac catcaaggcc cccggaaaaa gcccacacac ggccagcacc 240
 aacatcagcg actcgatcaa cgtgacgac agtggcacca tcatcaccct cggccacgac 300
 tgcttctcca tcggcccccg gaacaagacc atc 333

<210> 2170

<211> 416
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-041-Q1-E1-B5

 <400> 2170

 tcgtttgatc aatacaactc tctaaagtga gtcattattat catactatgt agttcctaata 60
 attacttggg actcatcaca ggaagaaaaa catgaaattg ttgaacgtta caaggccaaa 120
 ctcagggteta ttgattgtaa gcactttgac ttcgaaaagg gcacttgtcc atttgaagc 180
 agctgtttttt acaagcatgc ctactatgat ggccgtttgg aagacgcttt attgaatcat 240
 catgatgccg acgatgcaag cgcagctatt gccaaactta tgaagttgtc gtacatactg 300
 actcgggtac atgtgtaatg aaactcaaac gtatccttga tcaaactatgc tgacttcgat 360
 tgagattctt tgaccgagca tgcaaactta gatttcgcat tgtaatggat aatatt 416

<210> 2171
 <211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-041-Q1-E1-B9

 <400> 2171

 ggtcggccac gcgtccgcgc tcgtttctca ttcagcgccc gtacagccac cactcaaccg 60
 agccatatacg aaagtcttca acatcgcttc gtgcagcctg catcgatcga cgagggctgc 120
 acgaacgatg ggggtccgct cgcctcagt gatgacgacc agcctgctgg cgctggcgct 180
 ggcagcgctg gctttcgtct ccagggccgc ggcgagggc aacggctgtt ccagcgatgat 240
 gatgaccctg gcccgtgca tggacttcat ctccagcaag gcgtcggagc cggggatctc 300
 ctgctgctcg gtgctggctg gagtcgtgca gaccgacccc cgctgcctct gcatggctct 360
 ggacggcacc gccacgtcct tcggcatcgc catcaaccag a 401

<210> 2172
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-041-Q1-E1-C11

<400> 2172

gcggggtcgac ccaagcctct acacagattc gtaggataag ggctccccta atttaagccc 60
tacattgaaa attgggttttg gtcacatgc gtgtgatgac aaaaattgtg gcaatgcaga 120
ttatgttgat gatcttgatg acatttccca agaagatacc tgtggtagtt ctgatcctgg 180
caatggaatt gcggaagata aatttgaggt caatggatct gctcaaataa agcgtccaga 240
atttcaaaag ggtgtcttac gtacaaactg tatacattgt ttggatcgca caaatgttgc 300
tcaatatgcc tatggcctag ctgctttagg acaccagtta catgcacttg gttctgtaga 360
atcgccagaa gttcatctag actctccttt gtctcgacat ttgatgcatt tt 412

<210> 2173

<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-C3

<400> 2173

cgggtcgacc acgctctag ataacatcgt aggagaaagc gcctcattga aataaaaaag 60
cagtacacag tgattgatgc aaactttatc tctaagatcc caatgttgtc tgagaacaaa 120
caacactgag agagggtgct ccaaacgtct aattcagcac attaccaata tataaaagta 180
gttccgttgg ctttgcgata tcatcattta gcaaccttta agatgatacc atagatatta 240
tatggattcc taaggttga aatttgtgtc gtccgagtca cctagaatac ttgcttcttc 300
ctgtctgaca atgaacttga ttttgtatcg atctgacata tatatgcctg accaaatgtc 360
attaa 365

<210> 2174

<211> 333

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-B1

<400> 2174

ggcccaggcg gcaccacccc aaccttcattg gacgtccggg gttttggggc tggcttcaaa 60
atcaagtgca atagcccggg gaattgctcg gggaagccct tgggtgtgca catcacggac 120

atgagctatg agccaaatcg cggggtacca ctttcaatth accaggcacg gcgttcggcg 180
ccatggacaa gaagggcgat gacgagatgc tgcgcatagc gggcatcatc gacatgcagt 240
tccgaagggg taagtgaag tacgactcca aggtcacctt ccaccttgaa aaaggggtgcg 300
gccccagata cctggcactg ctgggtcaagt acg 333

<210> 2175
<211> 215
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-H10

<400> 2175

ggtcgaccct ctaaattgag tcatattacg ccatactccc cacgctgctc tccgtcaccg 60
acaaaaaact cggcttcttc aataacacaa gggccaacaa cgggcaaata tacttcggcg 120
ctccggggagc cccctgcgtg gccaaagctcg tcaaggctcg cgcagcgcg cgtactctg 180
tgtccatcat ggagatcagc gagcccattt tgccg 215

<210> 2176
<211> 180
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-040-Q1-E1-H11

<400> 2176

gaagagagaa acgcgagcaa ccagcgatcg ccccatggcc gccatggctc gttccgtctc 60
cctcgtcgtg gcgcccctgc tctctctctc nctctctgctc tccgccgcgg ccagcgcgcg 120
gaccgtgggc gacaccgtgc aggacgcgtg cagcaagacc cagttcccca agatctgcgt 180

<210> 2177
<211> 407
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-H2

<400> 2177

attactctat acagacgtcg tagtatcgtc ttcagataat gttgacgtag atgtgatagt 60

tgatggcaaa tttgaacatg gctacataat aactgttatt atgggatcaa aatccactaa 120
 agcaatcctc tataactgca ctgaagaacc tgctctacca acttcggagc tagctgttgc 180
 aagtaacaac aatgatttga aggggtggacg tcgccgaaga cgacgtaaga agaagctaag 240
 tacaacagac cccaggcacc ccaaaccaaa caggagtggc tataatttct tcttccagga 300
 tcaacataga atgcttaagc cacaatgtcc tggacaagac agattgatca gtaaaatgat 360
 tggatgaacga tggaacaatc taagtcctga agataaagct gtatatc 407

<210> 2178
 <211> 365
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-A11

<400> 2178

cggtagccac gatgacaact aataagcccc tctctctcct cgccctggcg tccgcgctcc 60
 ttggtgcggc gccggccgcc gcgaacgcgc ccggcggggc gttcagcaac tgggtggcga 120
 tgaaccagca gagctacgcg ctgtacgcgc agaagtcctg cggggacggg ggcaaggagc 180
 ccctggacaa gaagctgtcg gaggcggaga agaagaatgt cacgtacgtg gtggacccca 240
 gcggcaaggg cgactacacc aacatcaccg cggcgctgga ggatatcccg gtgagcaaca 300
 ccaagcgcgt gatcctggat ctcaagcccc gcgctcagtt ccgcgagaag ctgttcctga 360
 acatc 365

<210> 2179
 <211> 284
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-A3

<400> 2179

ccggcgctaa taaccgcgcg cagcaaggga ttgggaccaa caacatcgcc tgcaccgttc 60
 tacgtacgcg gcctctagta aacgtggccc tggacgcaga agcgccggct ccgtatctat 120
 cagcggctcc ttggcggtcg caccctacag cgtccgggac gccatggctc ccattctctg 180
 gtactccatt cactgaaccc ccggacaatg atccggctcg gtcggaatac acaccgcagg 240

gggatatagc ttgcagcgct gcactgcgct gctgctctcg cgca

284

<210> 2180
<211> 388
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-041-Q1-E1-A5

<400> 2180

tcgatacacg cctctaatac ccatcatcat actcaacaac agccagctcg cgaaaataat 60
gaagagccgc agcatggcat catcgccgc gctcttggtg ctagccctcg cgctagtggc 120
ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga gcggcggaga gcggcgaggc 180
ggcggaggcg aagaagatcc aggacgactt ctgctcgacg ctgtgcgagg gcaagaaggg 240
gacggacctg gtcgtgtgca aggagtcctg cgcgctctcc cagcagcca acctggtgct 300
gtacggcagg atccagtgcaggaggcaagtgc caccgagcag aagggcacatca cngcgccggc 360
catgaaggtc tgccangagg agtgcgac 388

<210> 2181
<211> 280
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-041-Q1-E1-A6

<400> 2181

gtgagtcgta ttaatcaaga acagccagct cgcgaaaata atgaagagcc gcagcatggc 60
atcatcggcc gcgctcttgg tgctagccct cgcgctagtgc gcaggcagcg cccacaggt 120
agcggcggca aagaagaaga gagcggcgga gagcggcgag gcggcggagg cgaagaagat 180
ctaggacgac ttctgtcga cgctgtgcga gggcaataag gggacggacc tggctgtgtg 240
caaggagtcc tgcacgctct ctcagcagtc gaagctggtg 280

<210> 2182
<211> 74
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-E9

<400> 2182

ctaaagtgag tcgtactaca cgcattgtcc agccggccat cacctggctt ctctgctca 60

ttgtgaccac cgat 74

<210> 2183

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F1

<400> 2183

gttggtcgat acaatactct acagtgagtc gtactactgc ttgacggcg agaactgga 60

gagtgtcct cctcctatga agaaggacta caagctggct aatcttctct gctgggagga 120

ggaagcggat gccatggagg agaaggcggg agtgcttgat gagtaagacg ggcttctggg 180

gtcgatttgc ttctgagttg tttattttat atcgctgcaa tttcgtggtt gtcgtttggt 240

tattctgtga agcagccaag ccaggctatt gttatgaaaa tttgtcgtct gtaagcatgt 300

gaacttccga tgttgccaca tgctggatca gtctgaataa gtaagtatgc agctctaggt 360

ggtcagctgc gtctaacaca atgagcatga acg 393

<210> 2184

<211> 208

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F10

<400> 2184

acaagactct atagtgagtc ttgtgagctc cgacgccggc gccggcgcag cgctcctcgt 60

tccctccgac cgccactcgt ggcacgactg cctcgccgag gccgacgcct gcttctccga 120

cctcgaggag cgccaggtcg tgccggtcca gggcaccgat cgggcccgcc gaaccatcgt 180

ccgtgtcgtc ggcaagttct tcccggct 208

<210> 2185

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F2

<400> 2185

aagactctag gatgagtcgt aatattgaga cctgcgttgt caccacacca tcaaggttgg 60
ggccgccagc aggttcagcc gttcctgttc ttgctaaaac gagagaagga tggcagtgtc 120
tcaggagact gtctatttct tgtttctcct cgtcgcagca gaggtgggaa ccatcgatgc 180
caaaatggga gtagccatgc ccatcgatgc cttgataatg gagaaagcga aacagcagga 240
gacggagaag aaggaggaga aaagcacgga gaaggaagag agtcaatgct tatcgccgag 300
tctccagttc gagggcttct gcttcaacag cgacagatgc gccgatgtgt gcatgaagga 360
gagctttccc 370

<210> 2186

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F3

<400> 2186

tccaagcctc taaacagagt cctaacaact gcaaaatcct cccaacagc ctggtgctgg 60
acttcgtgac gaacgccag atccgaggca tcacgtgct gaacagcaag ttcttccaca 120
tgaacatctt cgggagcaag aacgtggtga tcgacaaggt gacgatcaag gccccgggca 180
acagcccaaa cacggacggc atccacatcg gcgactcgag caacgtgacc atcagcggca 240
ccaccatcgc cgtcggcgac gactgcttct ccatcgggcc cgggagcaag accatccgcg 300
tgaagggcgt caagtgcggc cggggccacg gcacagcgt cggcagcctg gggcggtaca 360
agga 364

<210> 2187

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F4

<400> 2187

caagcctcta cacagacgtc gtattacgcg tccgccacg cgtccgcctc tctctgtcc 60
ctctacggtg cttctgctcg ccggcccaaa atcgctcat cgaccacgcc cccttcagg 120
ctcccgtctc catgggtctc ctctcaaaca ggattgggag ggagagcctc aaggcggggg 180
atcatatcta ctctggagg gcggcgtggg tctacgcga tcacggaata tatgtgggcg 240
atgataaggt gatccatttc acaagaggaa gaggacagga ggtcggaaca ggaactgtcg 300
tcgatattat tcttgtgagt tccaccccaa aacgaagcaa cacgccttgc ccggtgtgca 360
ccgacgaaac cagcgacagc agcacagaga 390

<210> 2188
<211> 350
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-F5

<400> 2188

tacaagcatc tacactcatt cttgccacgc tgctctccc gtcctgctcg tccccgcgt 60
accgccgct ccgcgcggcg ctgttcttg ccatgggct gtcgggcgtc gtcccggcgc 120
tgcacgcgt gtggctcaac tggggccacg ccgcctgcta cctggcgctc ggctcgagg 180
tcgccatggg tctcgctac gccacggcg catggttcta cgtcagccgc gtgccggaga 240
agtggaggcc cggggtgttc gacgtcgtg gccacagcca ccagatcttc cacgtgctcg 300
tgctcgtcgg cgccgtcacg cactacgtc ccgtcgccgt gtcattccac 350

<210> 2189
<211> 397
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G1

<400> 2189

acgatacaag cccctaggat gattcgtatc atccaataag agccagccag agaaactaat 60
aaaactctca ccgccgcat ccgagagaac aagccaaccg acccgtccc caaggcaatc 120
cgtcgccgac gtaccaccgc caccgagga gcgagatgga gatgaagagg atcctcttcg 180
ccgtcctcgt cgtcatcgcc gcctcggcca ccgcagtgtt ggctccacc gaggccgccg 240

ccgcggggcgc cccaactgcc tccgagtcgt ccgcgcgagggc tcccgcctggc gctggcgctg 300
 gcgctgccgc tggcgccgcc gccgcggggc cctccgccag cagcggcgcg cccgccctcg 360
 ccgccgcgcc cgcgcgctc ctcttctccc tctctgc 397

<210> 2190
 <211> 209
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G10

<400> 2190

aacactctaa actgagtcgt attagcaagt ggacgacggg cagcatcacgc aggaaggcgt 60
 gtcgacggag cgcgcgttcg aggcagaccc gatcccatcc ttgtcggaga cgatcacggc 120
 acgggcgata gcggccagct tcatcctggg cgtcgccctc tgcgccgtcg ccatgaagat 180
 cagcctcaac tcgggcttcc tcccgtcgc 209

<210> 2191
 <211> 376
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G2

<400> 2191

aatactctat actaacgtcg tattatggga ccccgatccg ccaccgcgcg accgatcgtc 60
 ccggatgcac gggccgtacc cgacggctgc tgctgctgct gcttcttctt cgggcgacat 120
 ggcggcgaac ggcatgaacg tggctctgca ccggcaggtc tcgggggggct cgatgaagca 180
 gaacgcggag ctccggcgcc aggcgtcgtc cgagtccccg cggacggggc gggccaccag 240
 ccggttcttg ttcgggcggc agtcgtccat ggacccgaac cggacgcgcg gccggagcca 300
 gagccccgtg cgcgcgccgg acgacctggg cgtgccggac aacctggacg cgaccatgca 360
 gctgctcttc ttcgcg 376

<210> 2192
 <211> 411
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-040-Q1-E1-G4

<400> 2192

caagcgtcta aacaattccc ctctctccct tcgtcaccat cacatccagc cagccaacaa 60
 aaatgtcgcg cgtcacagct gcggtgctct tctacatcct cgccgttgct gccctcagcg 120
 cggccgaggc cccggcagag tcaccgaagg aaggcagtgc tgccaaggca cctgagtctg 180
 ccaagagaac tgctgcccc gctgaagcac ccgaagccgc atccaccccc gtcgcccgcg 240
 ctgccccatc gccgtcgtct aggaagtctg gtccagctac cgcgccagcc accgcctcta 300
 ccccccttc ttccacggac gaagagttga gcccttcccc gccagcatcc accgcccgcg 360
 cgtcncctgc ggctgangga acggctgctg atgactccgc cgggtgctgct g 411

<210> 2193
 <211> 363
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G5

<400> 2193

ggtcgacaca cgcattctacc cactgacgtct gggtaggtgc attgcttcgg tgggccacca 60
 tggcgcagcg agcgggtggc acgatgacga ctaataagcc cctcctcctc ctgcgcctgg 120
 cgtccgcgct ccttgggtgc gcgccggccg ccgcgaacgc gccgggcggg gcgttcagca 180
 actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 240
 ggggcaagga gcccttgac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 300
 tgggtggacc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 360
 cgg 363

<210> 2194
 <211> 423
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G6

<400> 2194

aaccacgaa tccacatcaa ataaacaggc acacaagaac aaatacctcg ccaccaacaa 60

tggcctccag gtcctccatc ctacttgcaa cggcgatgct ggttgcgctg tttgcggttg 120
 gtttgtgcac cacccegtc accttcagg ttggcaagg atccaagcct ggccacctga 180
 tcctcaccac caatgttgca accatatctg acgtggagat caaagagcac gggggcgatg 240
 acttctcctt tacgtcaag gagggccga ccggcacctg gacgctcgac accaaggccc 300
 cgctcaagta cccctttgc atccgcttg ctgtcaagtc cgggtggctac cgcacgccc 360
 acgacgtcat ccccgccgat ttcaaggccg gcaccaccta caagaccaca ctacgcatct 420
 aat 423

<210> 2195
 <211> 393
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-G7

<400> 2195

tcgcgggtcg atacacgcct ctacactaat ccgccatcac tctccaacac gaagatggcg 60
 ttcatcagca atatcgagc gaaggcggcg gccgtggccg cgctgctgct ggtcgcagcg 120
 gtgtcgcttg ccgcgcgcgc ggcgggcggtg gcgggtggcg gaggggcgcc gtcggtgccg 180
 gcgggtccgc tggacatcgc gcagctgggc gccaaaggcg acggcaagtc ggacagcacc 240
 ccgatgatcc tcaaggcgtg gaagaacgcg tcgcaggcga cgggggtaca gaagatcgtc 300
 atcccgcggg gcaactacct gacgggcggg ctggagctga agggcccctg caagtccctcc 360
 atcatcatcc gtctcgacgg caacctgctc ggc 393

<210> 2196
 <211> 371
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-E8

<400> 2196

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 ggaacgccag agaccggcg gcggcgacga tggctccgag cagctcatcg gggcgacgt 120
 gcctgtgcct cgctctcgcc gcggccacgc tggcgctggc ccacggggcg caaggaggag 180

gaccatcggc atcggcggcg gacctggaca aggtcacggc cgagaccttc ctcgacatcg 240
 agatcgacgg caagcctgca ggccggatcg tgctgggact gtttggggac accgttccta 300
 aaacagcaga gaacttccga gcactttgca caggggagat aggaattggc aagtcgggca 360
 agcctctatg g 371

<210> 2197
 <211> 206
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-040-Q1-E1-C9
 <400> 2197

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 cccggagttg gtggcccca ggatngaggt cccggtgccg ctgccgacgc gggagcgcgg 120
 catgacgctg gccgagcagc tcgccgcgtc gtgcaacctc cgcgacctac tcaagctccg 180
 ggacgacggc gtcagtggca gtgaag 206

<210> 2198
 <211> 207
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-040-Q1-E1-D10
 <400> 2198

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 gcaaagaaga aaagagcggc ggagagcggc gaagcggcgg aggcgaagaa gatccagaac 120
 gacttctgct cgacgctgtg cgagggcaaa aaggggacgg acctggtcgt gtgcaaggag 180
 tcttgccgct tctcccagca gtccaac 207

<210> 2199
 <211> 200
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-040-Q1-E1-D11

<400> 2199

tctatatattga ctctcatatc accccgcctt cagcctccc tcaccaaata aggtcccgcc 60
cttttccgac attcacaggg gggacaggaa atcagcgcc atggcctcga ttccggcgac 120
gaccttcgcc gttatcttat ccgtctctt ctgtgcccg gctggcaccg ccgtcgacaa 180
cgacctcccc gactacgtca 200

<210> 2200

<211> 216

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-D12

<400> 2200

gcggggccat ccaagcgtcc gaaacacctt ggcgcgagt atggacgccc gtctcggcct 60
cggtcttctc cccttccctt gggcgccggc ttctgcccgg cgggcctcgg cgaagtctc 120
ggaaaatttc aacaaaactt cgtgccccaa cgccgaaaaa atcaccttgg gcgtcgtcaa 180
aaaccggttc aaggcggacc ccggcaccgc cgccgg 216

<210> 2201

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-D7

<400> 2201

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gctagctccc tccctccag ccattggcgac gccggacaac aaggggcacg ggcatccgct 120
gcccaagttt ggggagtggg acgtgaagaa tccggccacg tccgagggct tcaccgtcat 180
attccagaag gcccgcgacg acaagaagac caccaccggc cctggggctg ggaacgcgcg 240
cgcaggcatt ccgccggcct tcaggaacgg cggcgggcgac ggcgggtaca ggccccgactt 300
cggcgacggc aaccagtaca cgccgccccaa acggaagaag tgggccttct gtggctgctg 360
aaaccaagct cgctgtgctg ctgtgct 387

<210> 2202

<211> 202
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-E10

 <400> 2202

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 gatgtcacca cctacaacac cctgctgaac gcttgggtgc ttgccgtga tctggaaagt 120
 gcccccaagg tgtttgatga aatggctggg gaggggaccg accggaactc ggtctcgtac 180
 aatgtcatga tcaaggggta cg 202

<210> 2203
 <211> 209
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-E11

 <400> 2203

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 gtcaccgtgt tctccaccg gtacaagaac ccgcggcccg ccaccggcgg ctgctgcccc 120
 aggaacttga ggttgctctc gaacttggtc tccggcaggt ccgtgtcgat ccagttgtcc 180
 ctgagggtacc cggcgctcca cagcgggtc 209

<210> 2204
 <211> 212
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-E12

 <400> 2204

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 tattgcttgt agacaagaag atcggcctag aactgtgaaa gaaatatgtt cagttgctaa 120
 tggggccaca aagaaagaaa ttggcagagc aaaagaattt atagtgaaac aactggaagt 180
 tgagatgggg caatctatgg agatgggaac ca 212

<210> 2205

<211> 368
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-E2

 <400> 2205

 tccaacactc tagactgagt cctatgactg ctctcttct ctggccgtct cgccgcggcg 60
 gagaagactt tccgcggagg cggaggcgga ggctacggcg ggttgaggcg cggtggcgga 120
 ggcgggcgcg gcggtactc cccccgagc gaggcagcgc catccacgcc tgccgctggg 180
 gagacgacga ccccttcgtc aggcggcggt tactccaccc ctacgcaggc agcgcctacc 240
 acgcctgccg ctgaggagac gacgacgact ccttcgtcag gcggcggggg ttacggcggt 300
 gcaaccggca aggccttcctc aagcggcggc gggctggacc ccgacggcga ccagagggtt 360
 gggctgaa 368

<210> 2206
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-C8

 <400> 2206

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 agagaagtag ccacaagcat gtctggcatc atcgacaaga tccaggagac gctccacatc 120
 gggggcgacc acaaggagga gcacgagcac aagaagggcg aggagcacca caagaagggc 180
 gaggagcacc acaagaagga cgacggggag cacaaggagg gcatcgtgga gaagatcaag 240
 gacaagatca ccggcgagca cggcgacaag tccggcgacc acaaggacaa agaccataag 300
 gagaagaaag ataagaagaa gaagaaagag aagaagcacg gcgagggcca tgaccatggt 360
 gatggtgacg gcggccacag cagcagcagc agcgacagcg actgatctcg cc 412

<210> 2207
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-E6

<400> 2207

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aggtcacgcg cattacagaa gaagccgagt ggaccctcac cgacgctaata caagaagggc 120
ggagggtgaag gaaggaagac tccaaatggt aaaacaggaa ccaagaagta agcaatccag 180
atgaaacttg gttttgctgt gaccaacttc accttggtta gggacagata aacatgttga 240
tactatcggg tgatacattg atatttgcca cacgaatacg tcagtcctct taaggaggga 300
ggtcgctaga tcttcgggca tctgctgtaa atcactcgtt gatttggtgt agtacgaaca 360
gaaaacggac cacaaaaaac tcgaggatgg gaggaagatc atcatcaca ggacgttttt 420
g 421

<210> 2208

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-E7

<400> 2208

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atcacagggga gaacatcctt tgcttcccat ggccatgaag aagaaccaag actcccagtt 120
ggtcacgggc cggtagcaggc tgggccaact cctcggcagc ggcaacttcg ctaagggtga 180
caaggcccat aaggtggcca ccggcgaggc tgtggccgctc aaggtgctgg acaaggatgc 240
tgtgcaccgc tccggcatgg cggagaaggt gaagaccgag gtcgacgtga tgcggcgcgct 300
gcgccaccgc aacgtcgtcc gcctccacga gatgatggcc acgcgggtcca agatctactt 360
cgtcatggaa ta 372

<210> 2209

<211> 376

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-040-Q1-E1-A6

<400> 2209

ctcgcggggtc gacacacgcc tctacagtca ctcgggatat ggaatgagct caccacccc 60

cagagcatca agaagctggt aatcaagaac tacaaaggcg taaagtttcc aaaatggata 120
aaaggtccca agctaggaga ctcttccccc agccttgtgt ttttggatct tgaaaactgc 180
atgtcatgta ctaaactgcc ttcaattggc ctctgagtc aactccagtc cctgcaaata 240
tcaaatgcag actcagtcac caccatcggt tcagaattcc ttgggaccac tgtactttca 300
tcagccactc cattcnccaa gcttgagggt ttaaagctca gaaacatgaa gaaacttgaa 360
gagtgggtctt taactg 376

<210> 2210
<211> 341
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-A8

<400> 2210

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ggaaaggcac ttggtgcaga ggtctatgac tgcaacaaca tgggtggagca agagctgcct 120
ggaggcgggc tcctcctgta ccaaagcttc tgtgctgctg aagacgctgt tgctaactcg 180
cccaaactcg ttttccactg ctttgacggg caaacgcttg agaatgctcc tcctcctatg 240
aagaaggact acaaactggc taatcttcta tgctgggagg aggaagcgga ttccatggag 300
gagaaagcgg gagtgcctga tgagtaagac agggttctgg g 341

<210> 2211
<211> 374
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B1

<400> 2211

gggtcgggtcc aagcctctac agtgactcca ctaagcacga ccacgttatg ctgttcgggg 60
ccagcgacgc cgcgtccaag gacagggaga tgcaggtcac cgtcgccttc aaccacttcg 120
gcaaggggct ggtgcagcgg atgccgcgt gccgtcacgg cttcttccac gtggtgaaca 180
acgactacac gactgggtc atgtacgcca tcggcggcag ccggaacccc accatcatca 240
gccagggcaa ccgcttccgc gccgtcgacg acagcagggt caaggagggtg accaagcggg 300

agtacacgca gtacagcgag tacaagaact ggggtgtggaa gtcgcaggac gacctgttcc 360
tcaacggcgc cttc 374

<210> 2212
<211> 212
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B11

<400> 2212

ttacaaccct ctagagtgcac tcgtcttagg ccagccaaag cttgccatgg cagccgtccg 60
gtccgacagg gtccaccacc accaccgccg ctccgaggcg tcgtgcccgg caacctccgc 120
ggccgtggcg gcggcgaggg ccgatgacgc cctgcgccag cgcccgcggg ggctcgtgca 180
ggtcggggag cgggatcagg gcccgtgtc ga 212

<210> 2213
<211> 211
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-040-Q1-E1-B12

<400> 2213

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ggtgaaccga atgtcctcgg cggcaaaaag cttcaacaga gcctgcaaag caagggcggt 120
aaccctgttt gcgaaaatta caatttgttt tcccctagga tgagtcggga ataacatcgt 180
gatctactct gaagcanagc agctagtgcac t 211

<210> 2214
<211> 403
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B7

<400> 2214

gatacacgaa tctacactgt gtcacatcag cacctccgac ctgacgctgt acgtcaagct 60

caccgcctcc gtgcgcgccg agaaccccaa cgagatgata accatcaggt acggcgaggg 120
ctccacacc gtggtctcct accgcggcac gccgctgtgc tccgggaagc tcccggcctt 180
cttccagggc tacaagaacg tcaccgtcat ggacatctcc atggagggcc gccacggctt 240
cgggtcgggg ctccagcagg cgctagagga gagcgagaag gccggggaca tcccgtcga 300
catcttcgtc agcgtccccg tggagctgca gctcggtccc gtcgacctcc gccagattta 360
agtccacgtt cactgcgcgc gcgtcctcca tagcctctc cgc 403

<210> 2215
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B8

<400> 2215
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cccagagcgc aaaggatctt gtcacgagga tgcttgacct agatccttgt acacgggttga 120
cggcaaagca agtccttggt tagtagcctt aagttcaatc ttataagttt actgaaaacc 180
aaatagaacg ggcaggctgc atccgttcct agaaaaaaaa acaagggtttt tcttgaagag 240
cctgttattg ccatcattga agaaaaaaaa ccgaaatggt ttaatcatgc tgcgtattta 300
accataagca ctttatcgtg gaaaaaaaaa gagcaccctt ggctcaagaa tgctgataag 360
gcttcaaagt tgtcactcgg aaagggttgt cggtccaggc tgaaacaatt gtctcttaag 420
aacaagctta agaag 435

<210> 2216
<211> 200
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-B9

<400> 2216
tctaaactga gtcgtatcat ctctgcctgc ctgagctcac cgcacctcgc ctctcaccg 60
cgtttctctc gttaatccgg tagataatgg ccgatgccga ggatatccag cccctcgtcg 120
gcaacaacgg aactggcatg gtcaatgctg ggctcgctgg cgacgacgcc ccgagggccg 180

tcttccccag catcgtgggg

200

<210> 2217

<211> 185

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C12

<400> 2217

actatcaagc acctcctctt cccccgccgg gcaacaactc agccgccgca accgcaacat 60

cagcaatggg cgctgccca acaaaccaca agacgcttaa ggggcaggcc ccacctgagg 120

ccgccgtctc cacaccaaag gttgcccccg aggccactcc aatctccgtt gaggttgccg 180

ctgat 185

<210> 2218

<211> 296

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C2

<400> 2218

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gccatgggag ccgtcacggt ccaagatggt ccacatgac caccgcggca cgaatgcgtc 120

gtgtccagtg acctccgcag ccgttctctc cgccaaggcc gatgacgccc ggcgccagcg 180

cccgcggatg cacgtgcacg tccgcgagca tgacaagtgc ccgtcttcca cggggcacca 240

gcacctgcac caccatcacc atcagctgcc gcggtcggca gcgttaccaa ccttgc 296

<210> 2219

<211> 357

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C3

<400> 2219

gacccacgcc tctagagaga ggcataggac gtaagaagtg gtctaattcc tggatccagt 60

taggcgactt catcgtcgct ctcttcatta ccagatttcc ttgtcatcgt caagatccaa 120

gcatagactt aatttagtta tagacggatt ggtaagcctc gtgaaaattc acgtggaccg 180
 gggatatcatc cttgccgatc gcaacgcaag aggcatcgat ccgtaagtca tcttacggca 240
 ttgcatgaag aagcggaaga caagcgtgaa gaagagatca gtgaaacca tatggcaaca 300
 tgaacctaag ctgatecctcg cagatgccac ccaaccacag aatcttgaag tggtcga 357

<210> 2220

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C5

<400> 2220

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 aagggtccgc ccttttctc cgacatccac aaggggggag gggaaaacac gtacattcac 120
 ccgggggcaa taatggctc ggttcgggt ccggcgacga cgaccgccgc cgtcatccta 180
 tgccatgcg tcgtcctctc ctgtgccg gctgacgacc cgaacctccc cgactacgtc 240
 atccagggcc gcgtgtactg cgacacctgc cgcgccgggt tcgtgaccaa cgtcaccgag 300
 tacatcgcg gcgccaaggt gaggtggag tgcaagcact tccgcacccg caagctcgag 360
 cgcgccatcc acgggggtcac cgacgggacc ggcacta 397

<210> 2221

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-040-Q1-E1-C7

<400> 2221

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 ggaggggagg agggcggcag atggcggcgt gccggggcct cttcgagtgc ctgctcaggc 120
 tgctcaactt catcctcacc gtcgccggcc tcgccatggt cggctacggg atctacctgc 180
 tcgtcgagtg gatgaagata tctgaggacg gcagcagcgg ggggttgacg gcggaggtgc 240
 tggtctccgg ccggccgttg ttgggggctg tcgtctcgg tgacagcttc ctcgacatgc 300
 tacccaaagc atgggttatt tatttgttca ttggtgttgg tgctactgtc ttctcgtgt 360

ctctgttttg ctgcattgga acagggacaa gaaacacctg ccgtttgtgt ttccaagccc 420
tctt 424

<210> 2222
<211> 407
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-H1

<400> 2222

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atcttaattt atggccagca gaaactgaac acctcattgt caaagccccg gcatctcaca 120
ttgtgtagca tggaaaacag cttggatggt ccaatttcgc tgaagcagca gatgggttta 180
aggtcgctga tgctcttcaa aagcccaa at gtcagagcaa tagatcttct catggagtca 240
gcttcattgct tgcgtgtatt agatttgagc aagacagcag tggaggccat cccgaaatcc 300
attggtaact tggtagattt aaggtacctc aatcttgatg gggctcaagt cagagacata 360
ccttcttcca ttggatttct cataaacttg cagacctttg aaccttc 407

<210> 2223
<211> 399
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-H10

<400> 2223

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ggctactcaa atgagagcaa aggtagcgag ggcaagaatg atgttgtcta tcaatcagca 120
acacccgtca tggattcgaa ctcatccaat cacaggaatg tgccaagatc tgatgtgaaa 180
aacagcggcg tagtttcaca ctctagagcc tggagccga aaaccaattc ccctctcag 240
gacagctcag acggcatgat tgctgttgac gggcaagtgg attcccatgg tggtaggctt 300
gagatgaata cgtccaaagg atctgataca attaccatc tagtgaccag tagtgaaccg 360
acgaaaagga atgattgcca ataagtttca cacaacaaa 399

<210> 2224

<211> 323
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-039-Q1-E1-H12

 <400> 2224

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 ccccgccgag gatccggagc ctgggtacc tctcccaag gctctctgcg agcagccgcg 120
 gcgggggggc ccgtgcgtcc tcttagctt ctggcagcg cgcgaccgt tctccgggg 180
 ccggttctc tggcgggcc tgcgccctt ctccgtccgc ctccctcgc cggccggcac 240
 cagcaccgtc gtccacctct gggcgccgc gcggtccgc cggcggccg tgctctct 300
 ccacggcttc ggcggtcgc cga 323

<210> 2225
 <211> 389
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-039-Q1-E1-H2

 <400> 2225

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 agcccatga gctgaagaac gtgcggcg atttcatggt gaaattggtc cctgagcatg 120
 cacggaagca atgtgccttc gtaggggtggt gatctctgga taagaggatg acgactcgat 180
 gattagctga ggaccaagtt aatgtctgtt agaaactgcc ggagatcgac attgccagat 240
 gtggtgtggt ataagatagg caatatgtgt gattattttt tgttcgaggt tatcaccccc 300
 cttgccccag aaaagatgag aagatgtcga tgtaacaagc cctctgcgct tctgtaagta 360
 gatgagtgtt gctgcatgcc cctgggta 389

<210> 2226
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-039-Q1-E1-H3

 <400> 2226

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 ggatcgtcgg agaggaatcg caaagagggc cgtctcatcc gagttaagga agccatggag 120
 cacaaggagg ctgggtgcc a gggccccgag ggacccatcc tctgcatcaa taactgtggc 180
 ttcttcggca ggcgggcgac catgaacatg tgctccaagt gccacaagga gatgataacg 240
 aagcaggatc aggccaaagct ggctgcctcc tctatcgaca gcatcgtaaa cggcagcgac 300
 gccgtcatgg agccggttgt tgctggcagc aacacggtag tagctgttgc ccaagttgag 360
 ttgcaaacaa tgaacgtgca gcagcccgt gatgttgccg gaccagcga aggggtggcg 420
 g 421

<210> 2227
 <211> 444
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-039-Q1-E1-H5
 <400> 2227

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 ctggcgccaa catcagcgcc cttcgcgccc acgatggcac ccgtcacggc cgcctcctcg 120
 cagccgccga cctccctctt ggcggcctcg gcctccccac tgacactggc ctctattaca 180
 cggagatcaa gtcggggacg ccacccaagc actactacgt ccaggtcgac accggcagcg 240
 acatcctctg ggtcaactgc atcacctgag agcaatgccc ccacaagagc gggctcgggt 300
 tagacttgac gctttacgac cccaaggcat cctcgaccgg gagcatggtg atgtgcatc 360
 aggcattctg tgcagccacc tttggcggaa agctgccgaa gtgcggcgcc aatgtgccct 420
 gcgaatatag tgtcaactac ggtg 444

<210> 2228
 <211> 399
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-039-Q1-E1-H7
 <400> 2228

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cagccagctg ggcgccgcga ccgacgggtt cagcgagcag aacctgctgg gagaaggcgg 120
 cttcggggcg gtgtacaagg ggctcctcca ggacaccaga gaggtcatcg ccgtgaagca 180
 gctggacagg aacgggttcc agggcaaccg cgagttcctc gtggagggtgc tgatgctcag 240
 cctcctgcac caccgaacc tcgtcaagct gctgggctac agcaccgact ccaaccagcg 300
 gatcctgggtg tacgagtaca tgcccagggg ctgctgggat gaccacctcc tggacctgcc 360
 cccgagctgg aagcccctgc cgtggcacac gccgatgcg 399

<210> 2229
 <211> 387
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-039-Q1-E1-H8

<400> 2229
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 tgcgcaacca agcccaagac gcttgagggg caggccccag ctgaggccgc cgtctccaca 120
 cccaagggtg cgcccgaggc cactccaate tccgttgagg ttgcggctga tgaacaggta 180
 gctgagaagg tgggtggtgga ggagccggct gcggcgggccg acgttgagca tcagaaggct 240
 aatgaggtgg tcgctccaga ggcgggccgtc gccgagcccg atcacaagga ngangaagcc 300
 gtggagaaga ccgtcgtcga ngangagaag cagcggcagc cgccaatgca gagganaagg 360
 tcgccaccgc cgccgagacc acgacga 387

<210> 2230
 <211> 403
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-H9

<400> 2230
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 cttcaggaag atgtgccaga gcttgacgag gctcccagag gtgaccacgc cgcgcgagct 180
 gctgctggcg tcgatgcgcg tcgcgggcga gaaggccagg gaggccaaga gccgggtgga 240

cgagttcgcg gcgaggaacc acgagggccg gccgatggag tccatcctcg gcgcctgcag 300
 caacgggtac ggcaacgttg tgcagacgct cgaggaggcg cggaagatcg tcgccacgcg 360
 ggcggcgggcg ggcacccagg cccaggccga cgacatgaac acg 403

<210> 2231
 <211> 395
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-040-Q1-E1-A1
 <400> 2231

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 gatccttccc aactcgctgg tgatggactt cgtgaacaac ggggaggtgt ccggggtcac 180
 gctgctcaac tccaagttct tccacatgaa catgtaccgg tgcaaggaca tgctgatcaa 240
 ggacgtgacc gtgacggcgc ccggggacag cccaacacg gatggcatcc acatgggcga 300
 ctcatccggg atcaccatca ccaacaccgt cattggcgctc ggcgacgact gcatctccat 360
 cgggccccggg acctccaaag tgaacatcac cgacc 395

<210> 2232
 <211> 336
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-040-Q1-E1-A2
 <400> 2232

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 ggtcccgccc ttttccgaca ttcacagggg ggacaggaaa tcagcggcca tggcctcgat 120
 tccggcgacg accttcgcg tcatcttata cgtcctcttc tgtgccgcgg ctggcaccgc 180
 cgtcgacaac gacctccccg actacgtcat ccagggccgc gtctattgcy acacctgcg 240
 cgccgggttc gtgaccaatg tcaccgagta catcgcgggc gccaaagtga ggctggagtg 300
 caagcacttt gggaccggga aacttcaacg ctccat 336

<210> 2233
 <211> 424
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-040-Q1-E1-A4
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 gcacaggcga caaggcttgt gtcgggctcg ggagcagtga tataaacatc ccgatggaag 120
 aagcggttga tgaacctgtt aaaccggcgg aagctgtgga cgaagctggg ctgaagagag 180
 atgtctgctg ttcaccagct gagccaaacg aagccgttgg tcagaacgag ctcaatgagg 240
 ctgctgtcgt cgggtgaaacg acgactgaac cgaaggaggc tgaggatgaa gccaagataa 300
 taaagcaagt cgactgcgaa actgcatcaa aagaagttgc tagtactggg gccgagtcaa 360
 gggacgatgc cgctactatg gaacgcgagc cgctggtagc agcagcaaca gcagcacaag 420
 gaag 424

<210> 2234
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-039-Q1-E1-G8
 <400> 2234

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 gtgaccatcc aggtgaatgg caatctgctg gcgaccacgg acctaagcca gtacaaggat 120
 catggtaatt ggatcgagat tctacgcgtg gacaaccttg tcatcaccgg caagggaaag 180
 ctcgacgggc agggggccagc cgtgtggagc aagaactcct gcgtcaagaa gtacgactgc 240
 aagatccttc ccaactcgct ggtgatggac ttcgtgaaca acggggaggt gtccgggatc 300
 acgctgctca actccaagtt cttccacatg aacatgtaca agtgcaagga catgctgac 360
 aaggacgtca atgttacggc cccggggaca gcccaaacac ga 402

<210> 2235
 <211> 358
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F3

<400> 2235

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ccgccgagac cacgacgacg gtggaggcga agaagaagga cgtcgaggag gccaggaagg 120
agaagcaggc gcagcaaagc tgaccgactg tccgtgcatg cgcgtgccaa ctaataataat 180
tattgggtga tgataactga tgatcagtgt gtgatcgagc aaggagacga cacttgaatt 240
ctctacagtt ggcatacgcg cataggtcgg gagagacact ctcgactggc cacaccatgt 300
aaciaactaa cttctctcga tgtctcccat tttttctctc cacggagttc ttctgatg 358

<210> 2236

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F5

<400> 2236

tcgcgggtcg acacaagcct ctagactaag gcgtctgact tcgggctgtc caaggacggg 60
cccgggatga accagctgca cgtgagcacc gccgtgaagg gcagcttcgg gtacctggac 120
ccggagtact tccggtgcca gcagctgacg gacaagtcgg acgtgtactc cttcgggtgtg 180
gtgctgctgg aggcgctgtg cgcgcggccc cccatcgacc cgcagctgcc cccggagcag 240
gtcagcctgg cggagtgggg catgcagtgg aagcgcaagg gcctcatcga gaagatcatg 300
gacccaagc tcgccggcac cgtaacccg gagtcgctcg ccaagttcgc cgagaccgcc 360
gagaagtgcc tcgccgagtt cggcagcgac cgcattctca tgggcgacgt gctgtggaac 420
ct 422

<210> 2237

<211> 428

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-039-Q1-E1-F6

<400> 2237

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 gtcgaagcag cagtaccaat gcatcaagta cagtcaccga ttcactgcta cctcactag 120
 ttttaaattt atcatcacca gaagtagaag acgcatcaaa gttttcagct cctgctgtgg 180
 tggaaaataa ttggttttaa cgatcactgc cttcaaaaac ttggaaatta agaactgttg 240
 attccacct tagtcatgaa gagagggagc gtacgaggag gagagctgct gtgagatcag 300
 cttttgtcca gcatctcctt gtcaccacca tttttgaaga ctagcagatc aagcacagct 360
 catgcatagg aatcttgtgg gcgggccttt tgcncactca tttatctgga tggataatgc 420
 actaatta 428

<210> 2238
 <211> 297
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-039-Q1-E1-F7
 <400> 2238

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 aatgcatcaa gtacagtcac cgattcactg ctacgctcac taggtgggaa tttagcatca 120
 ccagaagtac aagaggcagc aaagttttca gctcctgctg tgggtggaaac taattgggtg 180
 agacgatcac tgccttgaga agcgtggaga ttaagaactg ctgagtcgag ccttagtcat 240
 gaggagaggg agcgtaggag gaggagagct gctgggagat cagcgtatgt cgagcat 297

<210> 2239
 <211> 417
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-039-Q1-E1-F8
 <400> 2239

tcgtcggtcg atacaacca ctacactgcg tcgtctcact caccocgctt tcacgctcc 60
 ctcaccaa ataggtccgc ccttttccga cattcacagg ggggacagga aatcagcggc 120
 catggcctcg attccggcga cgaccttcgc cgtcatctta tccgtcctct tctgtgccgc 180
 ggctggcacc gccgtcgaca acgacctccc cgactacgtc atccagggcc gcgtctattg 240

cgacacctgc cgcgcgggt tcgtgaccaa tgtcaccgag tacatcgcgg gcgccaaggt 300
gaggctggag tgcaagcact tcggcaccgg caagctcgag cgctccatcg acggggtgac 360
cgacgggaac ggcacgtaca cgatcgagct caaggacagc cagaggagg acatctg 417

<210> 2240

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F9

<400> 2240

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ggcggcaagg acctgacaga ggagcagatc gcctcgatgc gggaggcctt cacgctgttc 120
gacacggacg gggacggccg catcgctccc acggagctgg gcgtcctcat gcgctccctc 180
ggcgggaacc caaccaggc gcagctccgg gacatcgccg cgcaggagaa gctcacggcg 240
cccttcgact tcccgcgctt cctcggcctc atgcgcgcc acctcaggcc cgagcccttc 300
gaccgcccgc tccgcgacgc cttccgcgtc ctcgacaagg acggctccgg caccgtcgcc 360
gtcgcgcgacc tccgccacgt cctcacctcc atcggagaga agct 404

<210> 2241

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G1

<400> 2241

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cctgcgcgtg aacgtgaaga tgatcaccgg cgaccagctg gccatcggca aggagacggc 120
gcggcgcttg cgcattggga gcaacatgta cccgtccacc accctgctgg gcgacaacaa 180
gaccggcgag atgggccgcc tgaacatcga cgagctgatc gagaaggccg acgggttcgc 240
gggggtgttc ccggagcaca agtacgagat cgtgaagcgg ctgcaggacc ggaagcacat 300
ctgcggcatg accggggacg gcgtgaacga cgcgccggcg ctgaagaacg cggacatcgg 360
catcgcggtg gacgacgcga ctgacgcggc ccggagcgcg tcggacatcg tgctgaccga 420

gcccgggc

428

<210> 2242

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G10

<400> 2242

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gctacgcaaa tgatagcata ggtagcgagg gcaataatga tgttgatgat caatcatcaa 120

cagccgtcat ggattcgaac tcatccaatc acaggcatgt gctacgatct gatgtgaaaa 180

acagcggcgt attttcacac tctagagcct ggaagccgaa aaccaattcc catcctcagg 240

acatctcaga cggcaagatt gctgttgacg ggcattgtgga ttcccatggt 290

<210> 2243

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G12

<400> 2243

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cgccggccaa caactcagcc gctgcaaccg ccacatcagc catgggagct tgcgcaacca 120

atcccaagac gcttgagggg caggccccag ctgaggccgc cgtctccaca cccaagggtg 180

cacccgaggc cactctaata tccgttgagg ttgcggctga agaataaggta tcttacaatg 240

tggtggtgga ggaaccggct gcggcgccgc acgttgagca atagtaggct aatgaggtgt 300

tctctccaga agcggccgct cccgagcccc atcacaacga cgacgaaacc gtcgagaaaa 360

ccatcttcta ggaggacaat ccaaccgga 389

<210> 2244

<211> 116

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G2

<400> 2244

tgttgatcgc gcatcactga aggggagcag tggaatacgc cggtttcaga tctgccgctcg 60
tcatccatgg catgggaacg ccgtggtctc attggggggc ataaccgtgt tggcgt 116

<210> 2245

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G3

<400> 2245

gggtcgaccc aagcctctag agaaactcgt attattcttc ctctcctcg tcctctcaag 60
ttctgtctct tgtctctgtc atcctcgtc ggcttccccg gttcttgaga ggggaaagag 120
gaggcggatg agatggatcg ggagggatga gaggttccca gtgtgggaag ccgcgctcgg 180
cgctggagtc tccgccgaca tcgccgctgg gctcatcgag gtttaccgtt cgatgcctga 240
tcccgactac agcttcgtca agctgccacg taatctccag gaactccaaa tcctcattgg 300
ccatcttgag aactatacta ggcactacac cctagacgtg ttcgtcggct agtgcaccgt 360
gtagatcttc atgcagagct tcatgatcac tagaacgata ttcatgtcaa 410

<210> 2246

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G4

<400> 2246

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acagcggcct cgacccgat cctctctggc gcgtggcgcc gaccatggcc cagcccagcg 120
cggctgcggc ggtccggtgg cctggcccc acgcctagca tggggcccg cgcggcctta 180
gccagcgcg ggcgcggtg cccagccacg gcacgggtggc acgggcgct aggcgacggc 240
cccgtccctg acggcgcgcg ggcgagccc cgggtgtggcg ggcacggcct ccagcgggcg 300
cggccttagc cgcgaggcg agcgcgcggc ctcgggccga tggcgggcg gaccccgctg 360
gcgctaggcc ccatgcgca cggcgcgggc g 391

<210> 2247
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-G5

<400> 2247

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 cccatctagt gaccagtagt gaaccgacga aaaggagtga tggcaaagag gtctcacaca 120
 gcaaacatga gaacctggca cggaagatg gtaaccagaa ggtgagact gaacaggagc 180
 aggctaatcc tacactacgt cgccaaggcc agcccaatgc aaggtaccac aggggaggtg 240
 ggtcacacag gggaaggggg gggtatgaca ctgggaggcc aaaccatgtc acaaagtgtg 300
 agaggcggaa ggtggcagc catcttgaat accagccagt cggaccccaa acaaagctg 360
 cagacttcca acagagcctg ggcattggaag aacgaaccga agggcctcct gcttctggac 420
 aagc 424

<210> 2248
 <211> 373
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E12

<400> 2248

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 ggggcgcaag gaggaggacc atcggcatcg gcggcggacc tggacaaggt cacggccgag 180
 accttcttgg acatcgagat cgacggcaag cctgcaggcc ggatcgtgct gggactgttt 240
 ggggacaccg ttctaaaac agcagagaac ttccgagcac ttgacacagg ggagaaagga 300
 attgccaagt ccggcaagcc tctgtggtac aaggggtcga cgttccacag gatcatcccg 360
 gggttcatga ttc 373

<210> 2249
 <211> 352
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E5

<400> 2249

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tccaacgtcc aattctacta gactttgaat tcccttcgat tcatccggca cagcgggcta 120

tggaccttca gcagcaagct aattaagttg gcagcatgca ccgctaacct tatatactac 180

tgagacttcc aaattctagt atatgtaatc cttttgttcg ggttcatgat cgaattccaa 240

agagtggaaa acaagcaaaa ggttaaatat acatgccatt tttggaggca tttttttcat 300

gagggcatgt ttcgatatat ggaccactaa atatacatat catttacttt cc 352

<210> 2250

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E6

<400> 2250

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gggcggggccg gcgggcggcc atggacgtgg actgctctc gctgcccgcac gccccggcgg 120

gcgacgtgga tggcggcgcc gccccggcgt ggcccaaggc cgtgaccaac ggcggcgtcc 180

acgagctgct ggagtgtccc gtgtgcacca actccatgtt cccgccgatc caccagtgcc 240

ccaatggaca cacgtgtgtg tccacatgca aggccagagt acacaaccgt tgcctacact 300

gcaggcaaga gctgggcgac atcaggtgcc tggcgctgga gaaagtcgcc gagtcgctgg 360

agctcccctg caggtactac tcgctggggg gccccgagat catgccttac tacagcaaag 420

ataa 424

<210> 2251

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-E7

<400> 2251

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gccaccgctt ctggtgtggc tcttcccaaa ggtccgatcg acgtggcgaa gcatgttgct 180
cgggacgccc ggcgcaaagg tctcttcaag ggctgtgtcc cgacgatggg acgcgaggctc 240
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ta 422

<210> 2252
<211> 443
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-039-Q1-E1-E8
<400> 2252

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tcccgtcggc cctacgtggc cgacgggaat taactgggccc gacgagcgtt attaattaat 120
tctcgtcggc tcgaccatag ccgacgggaa ttaactgggc cgacgagaat taccctatac 180
tgctacaaaa acagcactaa attaggtcac tatttctgca cacataacat atatcacaca 240
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acaaacacat gcatttagac ataaacacat gcatttataa ttaaaatata caccaacgag 360
tacgacatag tattgaaaca taacatccac caacaagtac gacatattat tgaaacataa 420
catccaccaa cgagttcgac att 443

<210> 2253
<211> 397
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-039-Q1-E1-E9
<400> 2253

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ctgcgggtct gtcggcagcc gctttctcct attcatcaag actgtaatgt ctattgttgc 180
tacctaattgc ttctcacttg tcattttgga cacatgttcg acctattcaa ttttaattgag 240
atgcctgatg aggctacttg caaaaataca tgtggtgttc tcaatgaata atatcaaattg 300
ttgagctctc aaaaaaaaaa aaaaatataa aaaaaaaaaa aaaaacaaag gggggaagca 360
ctaaaagatc caaacttaac atattgctgc atgcgac 397

<210> 2254
<211> 369
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F1

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taggtgtccc gggcaacgcc acctcccaac tgcaagccgg tgtacctccg cagcgtgcaa 180
ccattgctga cageccgcag atgccgcggt tcgttaccct gcacgaccag gcctagccca 240
tgctcgcggt ctgectgcca gcgcagcggc acgaccagct aacagtatcg tcgtcatgct 300
cgtgtcctag tcgtcgttc agtgcgtcgt gcacgcagca tgtcatcgta tctgcctca 360
tctcgccgt 369

<210> 2255
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-F10

<400> 2255
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cctggcactg gcgtcgctgc tgataatcgc gtgcgcaacc ggcaagcagg gcaaccgggg 120
gaggaagcgg gagcggcacg cgtcgcgcag gcacagcatc gtggtgccgg aacgtcagtg 180
tggcgcagcc gggggcgtgg tgcggcgga cgtgtaccag ccgtcgaacg ggccggcgcc 240

gtcgcgcgtcg ccgagcggga cgtcgagctc gtacgacctg tcgggggcca acaagtcgtg 300
gttcacgtac gacgagctgg cgggcatcac gggcgggttc tcggcggcga acgtgatcgg 360
cgaaggcggg ttcgggaagg tgtacatggg cccctt 396

<210> 2256
<211> 381
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C11

<400> 2256

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cacgtacctc ccggaggcgg tgctcaacat cccgcccaac ccgtccatgg ccagcgcgcg 120
ggaggaggcc gagatgggtca tgttcgggcg gctggacgag ctgttcgcca agaccggggt 180
gcggcccaag gagatcggcg tgctgggtgg gaactgcagc ctcttcaacc cgacgccgtc 240
gctgtccgcc atggtcgtca accactacag gtcgggggc aacgtcgcg gctacaacct 300
cggcggcgatg ggctgcagcg cggggatcat cgccgtggac ctgccaggg acctgcttca 360
gtgccaccgg ggcaacctac c 381

<210> 2257
<211> 350
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C12

<400> 2257

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aagcacatca agtcgcgatg gagatgaaga aggtcgctg cgccgtcatc gccgccgagg 180
cctccgcgat cgtggctctc gccgtcgagg ccacgggtgc cggcccgacg agcgctcgt 240
cggccgcgtt cccggccgtc ggcgcggtgc tgggcgccgc cgtgagctcc ttcttcgggt 300
acttgctgca ctacactgag atgaggatcg gagggagagg cagggggctg 350

<210> 2258

<211> 402
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C2

<400> 2258

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gcaagctata tatatatata tatatatata tatataggag attcttcgag cgagctagta 180
gcgagatggg ttccgccgtc ctcttttact gcatctgcat cgccgccgtc gtcgcattgt 240
cgtcgtccat ggtcgccgtc aggtccgccg cctcggggga aaccccccaag ttcattctcg 300
cgagcgccct tgagtgtcc gctaacgtaa cggaatagc aaaggcgcgc aagctgatcg 360
atgtccatgg ccacaggctg tgcccgggtgc ggttcgacca ca 402

<210> 2259
<211> 397
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C4

<400> 2259

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caggatctca tgaacaccgt ctaagctctg ccttagatgg aactacgac gagaagagga 120
aatccaatgt ggaatacaca gaggacgaga agaaagccgt gatcgcggtc ctgaaaaaga 180
aggctttgag cgctcacag aagtttaggc attccatgaa gagggggagg aagagcagca 240
tggtgatgtc catctcgatt ctggatgagc gtgaacctga ggaggtgcat gctgtggatg 300
ccttcgccca gcttcttgta cttgaagagc tgctaccatc gcagcatgat gactaccaca 360
tgatgctaag atttctcaag gcaagaaagt ttgatat 397

<210> 2260
<211> 412
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C6

<400> 2260

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cctccctggc atggatgaag tagctgtttc gcctatgac gttggcgccg tactgctgga 120

caacaatggc gctgacgcgg tctcctgcac tgccatccac tagcgtaaca ataagcctac 180

aggagaaaga acatatcaat ggggatgttc ccacgatcat ctgggcgcga agcaaagatg 240

aggaggcggt gttcagtgtc cgagaatcta ccaacgacca tggccatcgc ttgacgatgg 300

aatgctccac tcccgtttcc tcgagtagcc cttctactcg caacaaccgc ggggcggttca 360

gcctcttcag ggcgatgttc ctgtccttcg gtcggagcga cgacagcatg at 412

<210> 2261

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C7

<400> 2261

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ggagatattg gagttattat atatatatat ataggtagac gatagataga cagctagatc 180

tatataacca tggatgatgg gttccgatgg atcataccgg gctctttcgt cctgtacttg 240

gtcttcttct tctgtccgc agccctgtcg gaggccaata tcggcgactt cgatgaatac 300

tggcagcagc gcaagctcat ggtcgacgcc gcggctgagg ccacgtacaa gcatgacccg 360

gtcgaggtcg ccaaccaact taaccgtgca gtccacagat ccgtcgagaa ggaggacatt 420

ggcac 425

<210> 2262

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-C9

<400> 2262

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cctgtgcggg caagcgggcg catccccggg gccctgaggg ggcgacactc ccaaggctag 120
cgagcaagcg gcgctctccg acatgcgagt agctacggca ccgcacaagg cacgagggtt 180
gagcagcgtc atggaaggcg cgagggtgtgt gcagcgatga tcgcgcgtga catcctccga 240
tccagcgagc ttccggcgggc ctgagtgacg acctccatct gttcttgtgt catcaacgac 300
gtcctccgat gactacctcc tctaattcgt gttgtctttc gattattatg ttttatgcct 360
accacatgca ctatttacgc taaaaactat aacgatttta tgcttg 406

<210> 2263
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-D5

<400> 2263
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ggtcgtacca ctacggccag atcaacatca cccgcaccat caagctcgcc atgggccgcg 120
gcaaggctga cggcaaggag aggttcggct tcaacggcgt gtcgcacgtg gaccgcgaaa 180
ccccgtgaa gtcgcccag tacttcaacg ccagcgacgg cgtgttcaag tacaacctca 240
tcggggacgt gccgccctcc aacacggccc ccaccaagat ggcacccaac gtcacacgcg 300
ccgagttccg cacgttcatt gaggtggtct tcgagaacct cgagaagagc atcgacacca 360
tccacatcga cggctacgcc ttcttcgccg tcggcatggg gcccgcaaaa tggacggcag 420
cgtcgcggag tacg 434

<210> 2264
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-D6

<400> 2264
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gtgagagttg agctgggaag cacgtctccc gtgctgttat tggtgacctg tgatccctgt 120
gtcagcgatg acgtgaggac tggcacctag cgccagcgct tccatcctga acaactcatc 180

agtagcaagg ttgatgcagc ctacaacttc gctcgtggtc accacatgat tggcaaggag 240
attgttgagc tgtgcattga ctgcatcagg acacttgcac ataactgcac tcgtctccaa 300
ggcatcctcg tcatcatcgc tagttctgga agagttggct cttggcttgg atctctccac 360
ctgtattgct tgtcagtgga ctatggca 388

<210> 2265

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A6

<400> 2265

tcgcgggtcg acgcacgcga ccggacacac tcgtggtaga ctattaggtt gtgccgcagt 60
gctcctgcta ccgcagctcc acttgttcga cttgtagaca ggcgtcgcta cgtgcgtggc 120
tgccgcgacg cggttctagt cgccagtccc cagcacactc gaaaccttcg cctccgatgc 180
gcgtctgcgg caaaggggat ggctgcggaa gcgacgcacg gcgggtgagg cgtcagcaat 240
ctgaggcgaa gcccttcgtc gtccctcttcg tgtgcctcgg gaagatgtgc gcggatcctg 300
cagctgaagc tgtggttcgg accctcgtac gtaaacaatgg gcgtgactcc ggattttctca 360
tagagtctgc tggatccatc gggt 384

<210> 2266

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A8

<400> 2266

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taatggtgaa cggcaaggcg tacagcttcg agaagatgca ctggcactcg ccgtccgacc 120
acaccatcaa cggccagagg ttcccgtctg agctgcacct ggtccacagg agcgccgacg 180
gcgcgctggc cgtcatcggg atcctctacc agctgggcgc cccggactcc ttctactacc 240
agctgaagcg gcagctgggc gacatggcca aggaccggtg cagcttcggc gaggaggagt 300
cgcaagaggg cgtcgccctc atccacctgc gctcgtgca gaagcgcacc ggcagctact 360

tccggtacac gggctccctc accgtgccgc cctgc

395

<210> 2267

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A9

<400> 2267

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ataaccctgc gtgcccttcg ttctcgtctc gatcccgacg acgctccctt cggtccgggc 120
aaaccacatc aagtcgcgat ggagatgaag aaggtcgcct gcgccgtcct cgccgccgcc 180
gcctccgcca ccgtggtcct cgccgccgag gcccggcgcc ccgccccac cagcgccctc 240
tcggcccggt tcccgccgt cgccgccgtg ctggcgccct ccgtgctctc cttcttcgcc 300
tactacctgc agtaaaatta aaggagggtc ggaggagat gctgctggct gccattgcct 360
gtattcgggtt ggattccgtt tatatat 387

<210> 2268

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B1

<400> 2268

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gccagagacc cgccggcgcc gacgatggct ccgcgcagct catcgccggc gacgtgcctg 120
tgctctgctc tcgcccgccg cacgtggcg ctggcccacg gggcgcaagg aggaggacca 180
tcggcatcgg cgccggacct ggacaaggtc acggccgaga ccttcctcga catcgagatc 240
gacggcaagc ctgcaggccg gatcgtgctg ggactgtttg gggacaccgt tcctaaaaca 300
gcagagaact tccgagcact ttgcacaggg gagaaaggaa tggccaagtc cggcaagcct 360
ctatggtaca aggggtcgac gttccacagg a 391

<210> 2269

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B10

<400> 2269

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taaagcaaat ggacgagatg atgaccttgc ctgtggcacc agctcacctt gacattcatg 180

acactccaat caaggttgcc ccaaggaaag gaggttctc cttcagaaca tgtaccacca 240

ccggggaacg gcatcaaata ttcctcgga cgaaggcac gccttccacc tacgcctaca 300

cccaaactgc taacgaggtt gtaccactg tctaccagag atggaacata ttcatgcc 358

<210> 2270

<211> 231

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B3

<400> 2270

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ctcagtgtct catgtgaagt tactccagat ccagatgtat gcctaccctc gctgcaggct 120

gataccgagt ctgttatgcc acaggatttg tcggaggccg cactcctttc ggtgacgatt 180

gcaagcggag cagcgggtga ctacgttcgg cagcactg atgtagtgag g 231

<210> 2271

<211> 357

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B5

<400> 2271

ctcgccggtc gatacaagcc tctacactga cgtcctggta aatgcagccc aaatcgggag 60

gtaaactccg tccaaggcta aatacaggcg agagaccgat agcgaacaag taccgcgagg 120

gagctcgggt tcttggtggg ttttcctttg ggtggagagc gagggagcgc agtcgagagc 180

cagcgagcag tctctcgtgc agtgcagtgc agtgcagtgc agctccggcg tagatgagat 240

tgtattgtga ccaagccggg agggaaagca gggaggggag gacaaagatg ttttgtcacg 300
 tttcatgctc cggccatcgc cggagtttgt ccggggaata tatcgatttc ctattag 357

<210> 2272
 <211> 386
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-039-Q1-E1-B8

<400> 2272

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 gatggctccg cgcagctcat cggcggcgac gtgcctgtgc ctcgctctcg ccgcgggccac 120
 gctggcgctg gcccacgggg cgcaaggagg aggaccatcg gcatcggcgg cggaacctgga 180
 caaggtcacg gccgagacct tcttggacat cgagatcgac ggcaagcctg caggccggat 240
 cgtgctggga ctgtttgggg acaccgttcc taaaacagca gagaacttcc gagcactttg 300
 cacaggggag aaaggaattg ccaagtccgg caagcctctg tggtagaagg ggtagacgtt 360
 ccacaggatc atcncggggt tcatga 386

<210> 2273
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-B9

<400> 2273

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 cagagagaga cttcctcgcc tccatcccat cccgccgccg ccgtctctac ggtagctaata 120
 aagccgccgc atccagggat ggagatgaag aagatgcctt gcgccgtcct cgtcgccgcc 180
 tcggccaccg tggcgctggc cgcggaggcg ccggtccgtt ctcccaccag cggctcctcc 240
 gcggtcgcac ccgcatcgt cggggccgcc gtggcctcct tcttcgcgta ctacattcac 300
 tgagccgccg gacgaggagc cggagccgga gggaagagac caaggtgggg ggagagactt 360
 ggctgcgctg cgtgctctg ctgctccgc gcattccga tg 402

<210> 2274
 <211> 273
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-039-Q1-E1-C1

 <400> 2274

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 tccctcacca aataaagtcg cgcccttttc cgacattcac aggggggaca ggaaatcagc 120
 gggcatggcc tcgattccgg cgacgacctt cgccgtcatc ttatccgtcc tcttctgtgc 180
 cgcggtctggc agcgccgttc acaatgagct ccccgactac gtcacccatg ggcacgtcta 240
 tttccaacac tggcgctccc gggtcgtgac caa 273

<210> 2275
 <211> 433
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-038-Q1-E1-H4

 <400> 2275

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 atgtcgcagt gaaggcggcg gccgtggccg cgctgctgct ggtcgcagcg gtgtcgccctg 120
 ccgcgcgcgc ggcggcggtg gcggtggcgg gaggggcgcc gtcggtgccg gcggttcgcg 180
 tggacatcgc gcagctgggc gccaaaggcg acggcaagtc ggacagcacc ccgatgatcc 240
 tcaaggcgtg gaagaacgcg tgcgaggcga cgggggtaca gaagatcgtc atcccgccgg 300
 gcaactacct gacgggcggg ctggagctga agggcccctg caagtcctcc atcatcatcc 360
 gtctcgacgg caacctgctc ggcaccggcg acctcagcgc gtaccagagg aactggatcg 420
 agatcgagaa cgt 433

<210> 2276
 <211> 387
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-039-Q1-E1-A10

 <400> 2276

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 tcgggaatgg ccgtttgtga cgaatgcaaa ctcaagttcc tggaactcaa ggccaagagg 120
 agcttccggt tcatcgtgtt caagatcaac gagaactgtc agcaggtggt ggtggacagg 180
 cttgggggac caggtgaaag ctacgatgcg ttcagggcct gctttccgc caacgagtgc 240
 cgctacgcgg tgtttgattt tgactttgtc actgatgaga actgccagaa gagcaagatc 300
 ttcttcatct cttgggcccc agatgcatcg agggtgagaa gcaagatgtt gtacgcaagc 360
 tccaaggacc ggttcacaga ggagctc 387

<210> 2277
 <211> 379
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-039-Q1-E1-A12
 <400> 2277

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 cctcctgccc tcgccgtgc tctcagatct cgcgcgcgcc ccgcaaaggg taactttgag 120
 ccatgggcac agttgtggat gctccagcag ttgtggctga agaggctact gagaacatgt 180
 tgggtggtaa gaaagttaca gctgtatttg ttctaggtgg tcctggaagt ggaaaaggca 240
 cacagtgtgc caacatttg gaacactttg gattcaccca tcttagtget ggagatcttt 300
 tgcgtgcaga gattaaatct ggctctgaga atggaaccat gattgaaaac atgataaagg 360
 agggaaagat tgttccatc 379

<210> 2278
 <211> 426
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-039-Q1-E1-A2
 <400> 2278

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 tccacggaca tctcactcgt gtccgtcggg aacgagatca tggacacggc cgacaaggcc 120
 ctcatctcca acctggtgcc cgccatgcmc gcgctcaagg cagcgtggt ggcgcgggg 180

tacccgaaga tccgcgtctc gacgccgcac tccctgggca tccgtgccgt ctccgagccg 240
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 ttccaccggc agagcaggtc gccgttcatg gtgaacccgt acccgtaactt tgggtacaac 360
 ggcgtgacgc tcccctaagc gctggcgccg cccaacccgg gcgtgccgga ccccggcacg 420
 ggcatc 426

<210> 2279
 <211> 353
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-039-Q1-E1-A3

<400> 2279

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 acgccgggaa tgggggtcttc cgcccggtgcg ctcatcggcc tccgtggtgc cgccgcctcg 120
 ctgcgccgtcg ggctctcggg tggcgccagg agtgggatgg cggcgccagt gtaccgggtac 180
 gcggcgggga gcccacacgg gccggagtac tgggggaagc tgagccccgc gtacaagctg 240
 tgcggggagg ggaagcagca gtccccgatc gacatcgta ccaagcatgc cgteccccggc 300
 gccaacctcg acactctcaa ccgcacctac ggcgccatca atgccacgct cat 353

<210> 2280
 <211> 434
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-H11

<400> 2280

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 tatctcatca accttgtgag aaggcttctc ttttgaagaa taatgaacaa ccatgaggtg 180
 ggcaattgaa ctcttgata gctggtgaaa aagtcatgtc acgtcggtag gctatagtat 240
 taggcattgc gacaaaaatg gtttctcatt taaggatcta gacaatggta ctttgtgtc 300
 aaaagatgaa atccaagacc atggtgacat ccattctaata gatgatgta agaagaatgt 360

gtgtggcaaa caagatttag atcaagattg ttcaatggat atatccagt acagaaagat 420
gaatatacaa tatg 434

<210> 2281
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-F7

<400> 2281

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ggcgggaata atggcctcgg ttccggctcc ggcgacgacg accgcgcgcg taatcctatg 180
cctatgcgtc gtctctctct gtgcgcgggc tgacgacccc aacctccccg actacgtcat 240
ccagggcgcg gtgtactgcg acacctgccg cgcgggttc gtgaccaacg tcaccgagta 300
catcgcgggc gccaaagtga ggctggagtg cagcacttc ggcaccggca agctcgagcg 360
cgccatcgac ggggtcaccg accgcgaccg cacctacag atcgagctca aggacagcca 420
cgaggaggac atc 433

<210> 2282
<211> 419
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-G8

<400> 2282

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caccgcctc cgcgcgctcc cgctgcgcga cgggaccaac ctgttcgcct gttcatccac 120
tcagcgacat tcacgcccgc atctcgccgt gggcagcacc gcactacca cgcgcgtcgc 180
agtgaggtca cgagtcagct gaagagcaag ttggtacctg gaatctcaag tcccaggtca 240
agaacaggta ccgcaggatg aggcgcattg aggatgctgt ggcgagttcg tgagaggtct 300
aggccatcgt ctcccagtca actttgggtt gctggaccgt tgtctcctta taatgaaatt 360
atattttat tttgtataga actcctgtta tatagtaaag atgtgacatt cgatccaaa 419

<210> 2283
 <211> 116
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-038-Q1-E1-E5

<400> 2283

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 atacataggg ttgaagaaag tggcatcatc gtgagccggt tcgcttcgcg ctatcc 116

<210> 2284
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-E9

<400> 2284

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 cggaataatg gcccggtgcat gcggtgttcct cgtcgtgctc ctccctggccg ccacgcggt 120
 ggcaccgttc gcgggcgccg caccgctgga cgttggtggag ggtaggtcca tggcatccgc 180
 cgatgcaccg gaggcggcgg ccgatgctcc cgctcctagc cccgaactccg cctcatcccc 240
 agactcgtca tcggaggcgc cctctagcag cagttcctcc gactagacgc aaaaacctct 300
 tcattctctg gaataactaa cagtatatac gttgcaccct gatgatatag aaacatgtac 360
 gtgcatcagt gtatggaatg cgagtggcaa acacatggaa tgtgcttgcc taattagtgt 420
 tt 422

<210> 2285
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D7

<400> 2285

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acagggagct gatggcggcg ctgtacctcc aagtaagcat catcagccag gcgctcatct 120
tcgtgacgcy gtcccggagc tggtcgttcg tggagcggcc gggcttctc ctgctcttcg 180
ccttcttcgc cgcccagctg gtggcgacgt gcatcgcggt gtacgccgac tgggacttct 240
gccgcatcca ggggatcggc tgggcgtggg gcggcgccat ctggatgttc agcatcgtea 300
cctacatccc gtcgacgtg ctcaagttca tgatccgcgc cgcgctcaga gacaaggcca 360
cgggcaacaa cgtccacaac aagtatacy tttatctggg tgcttgctgc ggacggcggt 420
taggaac 427

<210> 2286
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D9

<400> 2286
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gtcccggagt cccgggggaa attttgcccc agaaacacta gcgcgtcgga tcacaagcaa 120
gggcgaaaat tttctgtggc tccagcggct gaaggacgt gcggcaccca tgtcggacga 180
cactggtggc cgcgctctac ccaagttcgg cgagtgggac gtgaacaacc cggcgtccgc 240
ggacgggttc acggtcatct tcagcaaggc caggacgag aagaaagctc ccccgacca 300
aggccacatc aggaacaaca ggtcgggtgc ggctgacagc aaggactcca gggccgagaa 360
gatgacctcc tacaacgcca ggaccaacgc gtcgaagaaa tggttctgcc gtgtctcgcc 420
caacccc 427

<210> 2287
<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B4

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aagagctttc ttgacccaaa gaccactgca aagattcatg ttctgggtaa caagtatcag 120

agcaagcttc tcgaggtgat tgatgctagt gagttgccag aaatTTTTTgg tggaacctgc 180
 cgatgtgaag gtggttgcac gaaggctgac aaaggccctt ggaaggaccc cgaaatcatg 240
 aagatggttc aaagtggatg tgggaggtgt ggatcactcg gtacggcctc tttcgaggct 300
 ccggagaaaa tgatttgtga agacgacacg taccctaaga aacaagcttt gtttgatggg 360
 gaaacacaat tagctggaga cgagcattct cagtcacaga aaatttcccg tggccggatt 420
 gaacatcctc 430

<210> 2288
 <211> 399
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-038-Q1-E1-A11

<400> 2288
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 aaaccgagag acctcagccc tcaggcaagc cgaccgccga cgtaccaccg cgccaacccg 120
 agagaaagat ggagatgatc aagaggatcc tcatcgccgc gctcctcgta gtcgccgtct 180
 cggccaccgc agtgetggcc tccaccgagg ccgccgccgc cggcgcccca gccgcctccg 240
 agtcgtcggc gtccgccgaa gccccgctg gcgccgccgg cgcgggcgcc ggcaccggca 300
 ccgccgcggg gccctccgcc agcggcgccg cgcgcgcct cgcgcgcgcg cccgccgcgc 360
 tcctcttctc cctcgtcgcc tactagctgc actaagcgg 399

<210> 2289
 <211> 433
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-038-Q1-E1-A10

<400> 2289
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 ctccgacacg taaattgcac cgatcgagac acagggaaca tcggcaacag ccttggcggg 120
 aaccctgccc ctgtagctcc tcgatcgcgg ctgtcacgga gctcttacc acccctgcgg 180
 ccgtggacgc ggccaggctg gcggacatct gcatgggaac cgcgttcggc gatatctgca 240

ccaacacggt ggggagcgaa gtgcatagcg ccggtgtgtt agacgccatg gcggtgttgc 300
agattcacgt gggcgcggtt aacaagcaca gcgaggagga gagggcacac gtcaaggatg 360
ccgcaatgac agcgtcacac aaggcacgga cgggtgctgga cctgtacaac agcctgtacc 420
tgcacctaga tga 433

<210> 2290
<211> 425
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-037-Q1-E1-H11
<400> 2290

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cagccggtgc agtcgcttgt gcccaccgt cgtgcggttg gccacgggag cgccgtccac 120
gtacaccgag tgcgctcca cgcgctgcc cagcgccacg tgctcctgga tccgcaccac 180
gttgaacgcc cgcgcccgcg cgcgcggccg ccgcccgcagc tcgatccagt acccgttccg 240
gcgcccgtcc tcggccgtcg gcgcccagta cgtgtcgctc cggccgtcca tcacgttgcg 300
cgccgcgaac cgggcgcgcg gctcgtgct ggccctggcc tcgctgcccg cggcgaggtc 360
cgtgccgaag acggtggcca cgggggcccc gaactcgcgc agccgcgcga tgtcggcgtc 420
ctcga 425

<210> 2291
<211> 384
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-037-Q1-E1-H12
<400> 2291

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aatgggttcc gcaaaaaaag ctccccgggt ggttttcaac ccaaccgttg gaagttccgt 120
ttgcacaacc aaaaagacaa gagccaagaa agaagaatcc gccggaaccc ctggtgggtc 180
tgctggaggc agcggcgagg cgttcgacat ctccaagctc ggcgcgacca gcgacggcaa 240
gacggactgc acaaaggcag tccaagacgc gtggacgtca gcgtgcgaag cgaccggaag 300

cgccacgggtg gtgatcccca agggcgacta cctggtcggc cctctcaact tcaactgggcc 360
atgcaagggc agcagcatcg ccat 384

<210> 2292
<211> 423
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A1

<400> 2292

actcgcgggt cgacgcacgc ctctgcacag agtcatctat accagccagc cagcagccag 60
cttgcctgcc ggcgccgtcc ttcttctctg cctccgttcc attccgtccc gccctccacc 120
gccgccgccg cattcagga tggagatgaa gaagatcgcc tgcgccgtcc tcgtcgccgc 180
ctcggcggcc accgtggcgc tcgccgcgga ggctccggct ccggccccca ccagcggctc 240
ctccgccgtc ggcgccgccg tcggcgccgc cctcggggcc gccgtcgct ccttcttctgc 300
ctactacatt cagtgcgccc gccggggcgc ccgatgccg aggaagagac gaaggggaga 360
gagagtgaca tggtgcgcg cattccgatg cgtgggcatg ttttttgatt cgacacacct 420
ttt 423

<210> 2293
<211> 310
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-E9

<400> 2293

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ctgngcatgg gcagcaacat gtaccctgcc accaccctgc tgggcgacaa caagaccggc 120
gagatgggcg gcctgaacat cgacgagctg atcgagaagg ccgacgggtt cgcgggggtg 180
ttcccgagc acaagtacga gatcgtgaag cggctgcagg accggaagca catctgcggc 240
atgaccgggg acggcgtgaa cgacgcgccg gcgctgaaga aggcggacat cggcatcgcg 300
gtggacgacg 310

<210> 2294
 <211> 314
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-F10

<400> 2294

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 cccaaggttg cacctgagac cactaccatc cacattgagg ttgcgggcaa acatgcagta 120
 gttgagaagg tggaggagga caaggaggag gactaacag tggcgggcaa acaagagcca 180
 gcagccacca ttgagcctca gcagattgct agtgagggtga ccacttcgga agtggcggtc 240
 gtcgttgctg agcctgagaa caaagaagag gaggaagttg tggagaagac cgtcatcgag 300
 aaggagaagc catc 314

<210> 2295
 <211> 404
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F11

<400> 2295

cgggtcgacc aagcctccga acaagcctcc ggccaaaagg aaaggaactt agaaatcctc 60
 caaatccttg attcaaataa aacaactcct cctccctccc ctcaataaca acccaaactt 120
 gtaaccggca ggattctaac aaaaacttaa ttactttatg gacggattgg taggcctctt 180
 gaaagtccgc gtgggtccggg gtatcaacct tgcctaccgc gacgcaagag gcagcgatcc 240
 gtatgtcgtc ctacggcttg gcaagaagaa actgaagaca agcgtgaaga agagatccgt 300
 gaaccccata tggcaagagg agctaactct gaccgtcaca gatcccagcc aaccactgaa 360
 gctggaggtg ttcgacaagg acaccttcag cagagacgac ccca 404

<210> 2296
 <211> 303
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F9

<400> 2296

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gactcgccgg ggcgggatat acgaaaccat caatattatc atccaggatt cagtacatca 120
cctgattcca catcatccgc agcttagatt ctaccctgct tttctgttcg cagctcaatt 180
ccaatatccc aattgcatct caattcaatt caatcaattc tatcaatcgc atcctgccag 240
gcatcatccc taccaactag gctcactaca ctttcaactca gattcgcttt tacttatcca 300
acc 303

<210> 2297

<211> 408

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-G10

<400> 2297

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gggtctcttc tcaaacagga ttgggagggg gagcctcaag gcgggggatc atatctactc 120
ctgnaggggcg gcgtgggtct acgcgcatca cggaatatat gtgggggatg ataaggtgat 180
ccatttcaca agaggaagag gacaggaggt cggaacagga actgtcgtcg atattattct 240
tgtgagttcc accccaaaac gaagcaacac gccttgcccg gtgtgcaccg acgaaaccag 300
cgacagcagc acagagacga acggcggtgt atcctcctgt ctcaagctgt tcctaactgg 360
gggtgctctc taccgtttcg agtacgcagt caaccggcg ctcttcct 408

<210> 2298

<211> 362

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-E3

<400> 2298

ccccagatt ggattcccc ccaaaaacaa caagggcctt ggcccccttc tttccgggct 60
cgtccccgc cgttccttc ggcccccaa aggtgcaacc cggccaaca acacaacaac 120

tacaacggaa atggtcaacg ctagggcacc ttgtacggtc agcccaaacg gtgccggcgc 180
 tcctgacaac ggcggtgcggt gcgggatcaa gaacgtgaac ctgccaccct acagcggcat 240
 gacggcgtgc ggcaacgtcn ccatcttcaa ggacggcaag ggctgcggct catgctacga 300
 agtgagatgc aaggaaaaac ctgagtgtc gggcaatcca gtcacngtgt acatcactga 360
 ca 362

<210> 2299
 <211> 204
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B3

<400> 2299

gcgatccgta tgtcgctcta cgacttggca agaagaaact taagacgagc gtgaagaaga 60
 gatctgtgaa ccccatctgg cagcaggagc taactctgac cgtcacagat cccagcctag 120
 ctctgaaact ggaggtgttc cacaaggaca cgttcagcag ggacgaaccg atgggggacg 180
 cgagatcga cgtggcgccg ctgg 204

<210> 2300
 <211> 435
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B9

<400> 2300

gacgcgtatt acgcttccgg gctggttcgt ggatgccggc gccacagcct ctctgctgt 60
 cgctgctggt cgccgtgcta gcgggtggccg ccgatgtcgc caacgccggc cagccaagc 120
 ccctgacgcc tggcggggcgc gtggtacacc acaaccacgg caagttcacg gccgggccgt 180
 ggaaaccgc ccacgcgacc ttctacggcg ggcgggacgg gtccggcacc acggcgggcg 240
 cgtgcgggta caaggacacg cgcgcgcagg ggtatggcgt gcagacggtg gccgtgagca 300
 cggtgctgtt cggtgacggc gcggcctgcg gcgggtgcta cgaggtgcgc tgcgtggaca 360
 gccctagcgg gtgcaagccc agcgcggcga cactggtggt gacggcgacc gacctgtggc 420
 cgccaacga acaac 435

<210> 2301
 <211> 401
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C11

<400> 2301

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 tggtcacact cctccccggc tgccgtcccg gtcttggtccg cccggccggc gtctgcaggc 120
 gggggagccg cggcggtggc ggagatctgc atgaagactc cgtccccga cctgtgcacc 180
 aggacggcgg ggaagcacgc caacaagtac aagggtggtgg acgcggtgac ggtgctagag 240
 atgcaggtgg acgcgttcaa gaagcgcgtg aaggcggcgc ggaggctcgc caaggaggag 300
 gtcaagacgg ccgcgacgcc cgaggcgcgg agggcgctga acctctgcaa gacctactac 360
 ctggacgccg ccgacaacct cggcgctcgc aagcgcgccca t 401

<210> 2302
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H9

<400> 2302

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 caagtcgtac gaggactcca agtcgtcgct caaggccagc aagttcctgt acgagggcat 120
 caccagggac aatgtctcct accccatcat catcgaccag aagtactgcc ccaacaacat 180
 ctgcgtcaag tccggcgctt ccaaggtggc cgtcaacgac gtcgtcttca agaacatcca 240
 cggcacctcc aacacgcggg aggccatcac gctcaactgc gccacaacc tgccatgcca 300
 gggcgtgcag ctgcgtcaacg tcgacatcaa gtacaatgga tccggcaaca agaccatggc 360
 cgtctgcaag aacgccatct gcaagtcctat cggcttgga aaggagctcg cctgcactcg 420
 aacca 425

<210> 2303
 <211> 412
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A11

<400> 2303

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tcaggatctc caaccgggag ttccggccgg ggcactgcac gcactacttg aagcactcgg 120

ggctgctcat gaacgtgttc agcaacgcgt tcaacccgga catgagcccc cgccgggtacg 180

cgcacgtcga cgtcgacttc cgcaactcgg agcgggactg gtaccagttc aagtggcaga 240

ccacgtcgcc gccgtggtcc aagctgtgcg ccatgccggg gcgcgtgacg cgcgaggtgt 300

acggccagat gaccgtcgcg acgagcgtca acaaggggat ctactacttc atccagttcc 360

tggagcagct gcacgactga tccatcgtga gatagatcat caagttcaac ag 412

<210> 2304

<211> 296

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A3

<400> 2304

caggcacagg tccagaagtc gcgggacgca gcaggccaca agtccgggtg attgaccag 60

cgacgacgcc gccgaactcg tcaaccccag gaaaggcacg ctccggcacg ccgtgaccg 120

ggcccgggcg ctgtggatca acttcgcgcg cgacattgtg attcaactct ggcaagaact 180

catcgtgaac agcgaaaaga ccatcgaacg gccgcgaacg caagtgcaca tcgttggcgc 240

gcagattacc ctgcagaacg tgcgcaacgt gatcctccac aacctgcacg tccacg 296

<210> 2305

<211> 383

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-B11

<400> 2305

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gaacaacaat tgcaaggtaa attcccggaa cctgaattcc cggcgggacct tccggttcac 120

cttgtccagg atcaacaaca cggacatgga aatcaagggtg gaccgcctcg gcggaccgaa 180
caagggctac ggcaacttca ccaacagcct ccccgccaac gagtgccgct acgcgatcta 240
cgacctcgac ttcaccacca tcgagaactg ccagaagagc aagatcttct tcttctcctg 300
gtccccctgac actgcacgca ccaggagcaa gatgctgtac gccagctcca aggacagggtt 360
caaganggag ctggacggca tcc 383

<210> 2306

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B12

<400> 2306

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taacaaacca aacaaacctt taacccaaaa ttaacaaagg ccgaattcaa tttccaagggt 120
aaaacctttg gaagggaaaa acaattacaa ctcaaccggt gaatccagat tcgaaaatta 180
agattttggg gccccatta ataaaaacac aattgggttt taatccaatt ggcccaagtt 240
cgccaaaaag atgcagatga aaacacgaga ctctgcagct tattacagct gtgacgatca 300
ctttgttgtg gtggacaaaa cagttgacta tggtcgaaga ggatcaccgt cagataaaag 360
cagtgettca gaagtaagaa ctcatgttcg gccactggat gctagcacag cagcccac 418

<210> 2307

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G2

<400> 2307

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aaaatatgtt gctgcccagt ccccttctcg gaaatcaagg ctgcaccctc atcaggaacc 180
acagcagcag caaccacaag tgcaggtgga gctgcagcag caaccacaag tgcaggtgga 240
gctgcagcag ccgcaaccac aaaaacaagc agcacctgtt atgcgcagag gagcatctat 300

tgctgctcgg caagcagcaa tggcacagca atctctggag actatacccg ttccatcttc 360
 acccaagatc aagcgtcaaa catcagggag acctgggtcg gtggcatcca caaagcctgc 420
 agcagctgca ttccacacaa aacc 444

<210> 2308
 <211> 434
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-036-Q1-E1-G9
 <400> 2308

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 tcctgcgtaa ccatgagcga gatcatgaag cttaaagcgtg ggatcagcac caaaccagga 180
 gaccacctcg tccaaaatgg ccaacaacat ccatgtcacg aatgggagga gcaacagcgc 240
 tactggccct cgccgcgggc gccgccggcg agcccgacgg agtcgcccag gaccccaggc 300
 gggagccaga agaaggcgggt tctgggcaag gtgaagagca aggccaagaa atggatgcac 360
 atgctgcac acaagaagaa acccgcgcca ccggaggaga tgatgtggac cccagggggc 420
 gggcctggac ccag 434

<210> 2309
 <211> 243
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-036-Q1-E1-H12
 <400> 2309

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 ctctcccta cggaagggtt gccatccctt caccaacgga aacggtggac gtaccgctgc 120
 agcagcgggt catccgctca ggaaccacat tgataccggt cttttttcaa aactccatca 180
 tctcccacca ggattaatcg cactactgca tctaaacgc gtcacactt ccctgaaaca 240
 act 243

<210> 2310
 <211> 123
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-H2

 <400> 2310

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 tggacgttga tatgaacaca agtagcaacc ggcgtgttat accggtacag cgacatcgtc 120
 acc 123

<210> 2311
 <211> 165
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-H3

 <400> 2311

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 ggtacgecta atgttgagag aaactgtatt cttgtgctcc actttctgca gtgccgacgt 120
 gtaccctttc cgttttacta aattataatt agcttccctt cattt 165

<210> 2312
 <211> 403
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-H4

 <400> 2312

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 acctccttca ttcagaaccc tgtgttttgg aagggtatTT cacaatgaag cccaatcagt 180
 tgattacatc ccatgttgat atacataggg tatacccata cgagttccaa ccagagtttt 240
 caatgtctca tgatcttggg ttgaatttgt tttcacaagc cggtacagtg ctgggtactt 300
 ctttaagaca tcataggaag atctcttctt ctggaaatgc aatgggtccat ggagctttca 360
 atcgctcaa caagctttcc cgagctctct atttctggct ctc 403

<210> 2313
 <211> 431
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-G12

 <400> 2313

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cttttgcttt gtgttttttag gcggtaatat cagctgattt ttgagctgtt aaatagagaa  180
ctcgtctgtc aatttttaac tctagtcttc aagaaggaag acgagttgag ttccgtataa  240
tcggtgaatt cacatccttt tgcgcgcggc ggctccacat gtgccatcat ctcatggcca  300
tggcgcaatg ttatgcagat gtagtgtgaa atccgaagaa cctaagcatt ctgctcatct  360
ccatctccat atcagcgtca aatgctcaaa ttttttagtt caagtgactg ctgatacgca  420
tggaacaaaa c                                                              431
  
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<210> 2314
 <211> 439
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-E6

 <400> 2314

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actgctatag gtacaagtag gatatacagg cagaaataat gcaggaccct cttctgccgt  180
gcaatccttt agtttttgca aggagagggg ggggataatg catagatgga caattgctac  240
ctggcaccat ttttcagcat atgtatagaa aggagctacc catttgaaac tgaaagtcgt  300
aggcattgtt taattaagtg cgctagaaat accccagccg cattcagctc tttttatata  360
tatgctaaca ccgtaatcta atgttttaaac gctatccggt tcattggcta caactgtcaa  420
tgatatgtac cgagactta                                                              439
  
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<210> 2315
 <211> 431
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-E7

 <400> 2315

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 ggctgcatcg ccgctgctgt cttctccggc ttcattcatc acgacaccga caacctcatc 180
 agggcttact cctacgacga gtacgtcgcc gccgccatcg agctctacct cgacatcatc 240
 aacctcttcc aggccatcct agcggtgctc gaaggcgctg actgataggg tcatatatat 300
 aacacggccg gctgaggctc atgggctgtg agcatatata cataggatca tatatatgca 360
 atctatacat gagctaccac taccactacc cagaaattgg ttccaagctt gcttggcaat 420
 ctgttatcca t 431

<210> 2316
 <211> 126
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-F11

 <400> 2316

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 ggcggagctg tgcgtgaaca tcgcgccga gaagggatcc gggatggcca cgttcgtgca 120
 cgggaa 126

<210> 2317
 <211> 223
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-F12

 <400> 2317

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 cgtgctagta gacagcggcc cggtcgggca catactcctc ttctatatata catcggattt 120

ggatgggagg catatatgta cgtgtgtgta atatattatt actacatctt gtactatatg 180
cgacgattgc ttgactgatg aatcacgctt tttagggttag acc 223

<210> 2318
<211> 453
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F3

<400> 2318

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atggcgagc gagcgggtggc cagcatgacg actaataagc cctcctcct cctcgccctg 120
gagtcggcgc tcttgggtgc ggcgcgggccc gccgcgaacg cgcggggcgg ggcgttcagc 180
aactgggtgg cgatgaacca gcagagctac ggcgtgtacg cgcagaagtc cgtcggggac 240
gggggcaagg agcccctgga caagaagctg tcggaggcgg agaagaagaa ggtcacgtac 300
gtgggtggacc ccagcggcaa ggcgactac accaacaatca ccgcggcgct ggaggatata 360
ccggtgagca acaccaagcg cgtgatcctg gatctcaagc ccggcgctca gttccgcgag 420
aagctgttcc tgaacatcag caaggcgttc atc 453

<210> 2319
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F4

<400> 2319

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cccgtcggga ggtcgggagc ccggcgcccg gagggcgacg tcgtccctaa taaataactaa 120
taatttatca ctatgcataa ccaatatata agccatgggc aagcgcagcg tccctcggta 180
ccctgaggac gaggacaaag gcggctgctg cggctgcctg tgctgggtgct gctgcttcct 240
gttggttcac gtggcgggcg tggccggcac ggccgcctac ttcttcttcg tgtacaagcc 300
caaggcgccg tctactccg tgagcaacat gtccgtctcg cagttcgact tcagcacctc 360
cgacctgacg ctgtacgtca agctcaccgc ctccgtgcgc gccgagaacc ccaacgagat 420

gatcaccat

429

<210> 2320

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F6

<400> 2320

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ctcagcttcg gggactggat ggcgcccacg aagcccaacc caaacgagct caccggcgcc 120
atcgtcggcg ggcccacaaa gaacgacggc ttcgtggaca agcgcggaac ctccctctac 180
accgagccct gcacctacat caactccctc gccatcgggc cgctcgccgc gctcgccgctc 240
cgaggcggtg agctcgtcgc cagcgagtga tctatcccca tgcgtgcgtg tgtgtccgcg 300
tgtttcggtt cttccctgac atgatatgat ttctactccg ttactgatg 349

<210> 2321

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F7

<400> 2321

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atccctccaa ggcggacaag ggattccacg gaggagggtg cccggccgcc ggtggatact 120
acggcgccca gtaccccggc ggcggctacc ctgctccacc ggcggcggtg gcgtaccctc 180
ccgggcctgg gtacccggta ccacctggtg ggtacccgcc tccgggtggc taccctcagc 240
ctggcgata cccgccgtcg cagggggcgt acccgccgcc ggggtgcaggc gcgtatcctc 300
ccagcggtg ccccatcaa ccggtctacc cacagcctgg ctatccatcg atgcccggtc 360
atggtggcat gtacggagga ggccacggtg cagggggctc tgcaggccac ggggcgatg 419

<210> 2322

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F8

<400> 2322

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ggggcacgac ggcgggccgac ggcgggcgagg agggagacga tcgatccaag aggaggtgta 120
tccgtgcgta cgtgtgtgca gcgagcagct agggcatatg cattatttca gaagagaact 180
agctactccg atcaagatga gcgacgaagg attgtacgta tattgctgag aggagatcga 240
agagacggtg atgagttggc ggaagatcga tgcattgcgtg gatgatcatc acagccaatc 300
gtacgtgtgt aaaaggctcg cgggagggga ataatcgtgc atgagacacc tctctcgtc 360
gctcttctc tctacgtct taattcattg ggttcgtcga tccgagatcc tacgtacgtc 420
gtcgtttttg t 431

<210> 2323

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-F9

<400> 2323

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ggcctcggc cttgcgccc agccgctac cctcaaggc cttcgacaag cgctccgccc 120
cccgcagcag gaagcctgac gccgaccgcc gcgcgcggtg ggagatcagc gtgctctccc 180
gccttgcgca cccgcacctc cctcgtctc tcggcttcac cgagacggac gaccttctc 240
cgtgggccgt cccctactgc tccggcggcg acctcaacga gctccgctac tcgctccccg 300
accgcatctt ccccccgcg gccatccgct tctacattgc cgagatcgtc tccgcggtcg 360
ccgagctcca cgcgcggggc gtcgtgtacc gcgacctcaa gcccgagaac gtgctcctcc 420
gcgccgacg 429

<210> 2324

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D11

<400> 2324

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cccggtgccag cagcagtagc agcagccggc gtgtgacgct ggtactgctc ggtctccgcc 120
tgctgcttct ggttgggtgtt gcgcaggcgg tagtggagtt ggtgcctgct gatgataata 180
tcgccgccgc cgctgctggc acggcgggtgg acgatggcga gccgcctcag cagtgcgcga 240
ccccggtgag cgtggaggag gcgtgccgcg gcgcgtccga gacgcacgcc ggcgtggcct 300
acgaccactg catggcgctc ctgggcgccg acccgcgag caaggaggcc ggcaacaaga 360
acatgcacgg gctggcgggtg ctggccacca ggatggccat cgaccacgcc gccagaccg 420

<210> 2325

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D12

<400> 2325

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gatccccgac gccgggacca tccacgcga eggctcggag accgtcacca tccccttct 120
gctggtctac gacgacatca ggagcacgta caggagatc gagcccgga gcgtcatccc 180
ctacaaggtc aggggtggtec tccacgtgga cattcccgtg gtcgggaggg tctcgctccc 240
gctggagaag gacggcgaga tcccggtgcc gtacaggccc gacgtcagcg tcgacaggat 300
caagttcgag cagttctct tggaggagtc caccgcgacg cttcacctga gcctggacaa 360
caggaacgcc ttcgacctgg ggctcaactc catggactac gaggtgtggc tcggcggcgt 420
gagcatcgcg tccgctg 437

<210> 2326

<211> 455

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D4

<400> 2326

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accggcacgc aggacaagtg cacggcgtgc gacaagaccg tccacttcat cgacctctc 120
acggccgacg gcgccatcta ccataagaca tgcttcaagt gcagccactg caaaggggtc 180
ctctcgatgt gcagctactc ctccatggac ggtgtgctgt actgcaagac ccacttcgag 240
cagctcttca aggagaccgg gagcttctcc aagaacttca cgccaggtgg caagtcatca 300
gacaaggggtg aactgacaag ggccccaagc aagctgtcgt ctgcattttc tggtagccag 360
gataagtgcg cagcatgcc aaaaacagtg taccgctgg agaagttaac tctggaaggc 420
gagtcctacc acaagagctg cttcaagtgc tcgca 455

<210> 2327

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D7

<400> 2327

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ctcgcggtg ccgtcgcggt cctggccgcg cggccggcgt ctgcaggcgg gggagccgcg 120
gcggtggcgg agatctgcat gaagactccg tccccgacc tgtgcaccag gacggcgggg 180
aagcacgcca acaagtacaa ggtggtggac gcggtgacgg tgctagagat gcaggtggac 240
gcgttcaaga agcgcgtgaa' ggcggcgcgg aggctcgcca aggaggaggt caagacggcc 300
gcgacgcccg aggcgcggag ggcgctgaac ctctgcaaga cctactacct ggacgccgcc 360
gacaacctcg gcgcctgcaa gcgcgccatc ggcttcgcgg acgccgtcac catccgcgcc 420
acgatgagca tg 432

<210> 2328

<211> 186

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E11

<400> 2328

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tcgggggttg ttgggctggg gggcttaggc tcgggtctcag gggtcctggg cgtactcggt 120

gggactagtg gtactgtggg ggggggggtg ggcgacgcta agcgccgtgt ggctgacgca 180
ttaggc 186

<210> 2329
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E2

<400> 2329

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atagacctaa taagaacaga gacgtacgat aacctgttta ttttgcgacc catcccgttc 120
ccacgcaaag gcgccgagcg tgatctcgt ccgtgcgcgc atggcctcgc accgggcgct 180
gctgctgctg ctctcgcgc ccgcgctcgt cgctgcgctg gcctctgtcg catccgccga 240
cgacgccatc gccatgceca tcctcctgac ccccgtagcg cataccccgc tggggtcctt 300
cgacggcgac aagccggcct ctgacgacga cgccgtcgac gacgacgagg acgccgcccc 360
tgtcggcgcg cccaacgggg ccaccatgac tgagcccaag gacgacgtcc ccgccgcgcc 420
cg 422

<210> 2330
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E3

<400> 2330

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cgtcgtcgcg gtggtcgtcg gcgttgctgc caccgtcacc cactccggca agaaggccgg 120
cgacgacttc accgtcccgg gggaagcctc cattgccacg tccggcaagt cggtcgagtc 180
cctgtgcgcg cccacgttgt acaaggagtc gtgtgagaag acgctctccc aggccaccaa 240
tggcaccgag aacccaagg aggtgttcca cagcgttgcc aaggtggcgc tggagtcggt 300
gaaaacagcg gtcgagcagt ccaagacgat cggcgaggct aaggccagcg actccatgac 360
cgagagcgcg cgagaggact gcaagaagct cctcgaggac gccgttgacg acctcagggg 420

catgctcga

429

<210> 2331

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B7

<400> 2331

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ccaggggagg atctcaatga atggctagct gttaacactg ttgatttctt caaccagggtg 120

aacatcctgt atgggtactct aatggagttc tgcacaccag ctacatgccc aacaatgtca 180

gctggaccaa agtttgagta tagatggggc gatgggggtgc agatcaagaa accaattgag 240

gtttcagcac caaagtatgt tgagtacttg atggattgga tcgaagctca gcttgatgac 300

gaatccatct tccctcagaa actcggaacc ccttttccac aaaatttcaa ggaagttgtg 360

aagacaatct ttaagcgact tttccgtgtt tatgctcata tttaccactc acattttcaa 420

aagattgt 428

<210> 2332

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B9

<400> 2332

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tgggcacgat tacaactaat tcgtgggtca tcgtattagc tgtggcgctc gcgatcggtg 120

cagcgctcggc tgccgacgcc aatacaccga gcagagcgtt cagcacctga ttaccgatca 180

accatgagtg ctcaacacta gtaccacaga agtccgtctc agatcgtagg taggagcccc 240

ttcactacag actgtctcga agcgcaacat cgagagtcac atgattgatg aagtcacaa 300

gcacagggta atagaccaat atctctgccg cgctaaagga tatcccggta agcaacacca 360

atcgctgat gttgcatttc aagacctgaa cttacttacg ctaaaaggta 410

<210> 2333
 <211> 408
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-C10

 <400> 2333

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 ttgagggcat caaggcaaca gggcggtgca acctgttcct cgtcggacag ggcacgccct 120
 gcatgccgct ggttgactgg agcacggaca gcccgagct cgggccggtg ggtacttacc 180
 tggcgctgcc ggaattctcg acggtggcat ctgtgctggt catgaaacag tacgatccga 240
 tggcgaagca cgacgacttc gtcgaggagg tggccgacat agcgggtggac gttgacacgc 300
 cgggccccag taaccgggga aacaatacta gcttccatgc cggatgatac gtgctggtgt 360
 tagatgtatt attaacatgt cgagcagaca agactgatta acattatg 408

<210> 2334
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-C4

 <400> 2334

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 aatcttctaa agaatgtcga agaggactac ttcacagctc tgcaaagtgc acctgcccc 120
 gtataatgaa gaaactgata aatatctaaa agggacatg caaatcaagg tgtaaactctt 180
 aacagtgcca gaaatctggc agttttgggt gaggagattc tacctgccat ttttcggttt 240
 gtacatagga gcttgtaaca tttgtggttt tttttatatg ggccaggata gaacttctcc 300
 attgtttgtt caaggcaagc agaattatcg cctgcatgtt gtattttgta taaatgttca 360
 tcctttaact aaaactcaga agtgaagatt gatataaaga aagaaaagag gaagaccagg 420
 gaggagggga 430

<210> 2335
 <211> 437
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C6

<400> 2335

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ttggacaccg ccaccgacct gacgtggatc aactgtcgtc tgcggcgccg caagggcaag 120
cactatgggc gacagtcatg ggggcagacg atgtcgggtg gcggggaagg cgcgacggcg 180
gcgaagaagg aggcgagcaa gaactggtac cggccggcca agtcgtcgtc gtggcgccagg 240
atccggtgct cgcagaagga gtgcgcgggtg ctgccctaca acacgtgccg gagccccagc 300
aaggcagagt cgtgcagcta cttccagaag acgcaggacg gcacggtgac gatcggcatc 360
tatggcaagg agaaggcgac ggtgacgggtg tcggacgggc ggatggccaa gctccccggt 420
ctcatcctgg gctgctc 437

<210> 2336

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C9

<400> 2336

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ctggtggcga cgtgcacgcg cgtgtacgcc aactgggagt tctgcaagat gcagggcatc 120
ggctggggct ggggcggcgc catctgggcg ttcagcgtcg tcacctactt cccgctggac 180
gtgctcaagt tcgccatccg ctacgcgctc tccggcaagg cctggaacaa catcaacaac 240
aagacggcct tcaccaaccg caccgactac ggcaagggcg agcgagaggc gcagtgggcc 300
acggcacaga ggacgtgca cggcctcaac caggccaccg ccacctccga cctcttcggc 360
gacaaccagg gctaccgcga gctgtcggag ctcgccgag 399

<210> 2337

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B2

<400> 2337

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gcacccggtt cagccgcacc aagggtccaga cgtctataaa aggagcccag gtcactaggg 120
tttagttttg acgccccacc ccggtgcaca agcgggggacg agtaccgaga ggagcacgac 180
gatggcggtt cccaaggggc gcgcacgacg gctcccccaa gcgcacgacg gtgacggttc 240
ctgaggtgca catgtggtgg ctgctctcca aggcgcacgt tggcgacggt tcccaagagg 300
cgcgcgcggc tggctctcag gaggcacgaa tagcggcggt ggccagaagc atgcacaggc 360
agcaacacct ccctgttggt agtgtgacag taagggcctc tacctcaaac tatttttcgag 420
ctccgacgaa tcggacgcca 440

<210> 2338
<211> 407
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-035-Q1-E1-H9
<400> 2338

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ccgctctgct ggtgttcgcc gcggtgtcgc ctgccgcgcg cgcggtggcg gcggaggcgg 120
aggcgaaggc gaaggctgtg ggaggcgcgc cgtcgggtgcc cgctggctcg ctggacatcg 180
cgcagctggg cgccaagggc gacggcaagt cggacagcac cccgatgggt ctcaaggcgt 240
ggaagcacgc gtgcgaggcg acggggcagc agaagatcgt catccccaag ggcaactacc 300
tgacggggcg gctggacctg gtggggccct gcaagtctc catcatcatc cgctcgcagc 360
gcaacctgct cggcaccggc gaactcaacg cgtacaagag gaactgg 407

<210> 2339
<211> 382
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-036-Q1-E1-A3
<400> 2339

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gtcaacgtgg actacgccg cacgaacaac aaaacctgg tcgtctgcac caacgccaag 120

ggcaccgccca aggggaagcat ccaggcactg gcttgccctgg tctgatgatg accttccttt 180
 tgcattgcatg catggtatct catccttgat gatgatctag ctcattactt ctttttaatt 240
 tcggcttcat tcgcttttcc aaattcgatt gtgtttcagc caagttgttt aacgggacat 300
 ctcttgatcat atcttcctgc tacatagact tggactccta tatatacagg ccttcacagca 360
 catataacat acgtcggacc aa 382

<210> 2340

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-A5

<400> 2340

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 ctcccccgcc ggccaacaac tcagccgccc caaccgccac atcagccatg ggcgcctgcg 120
 caaccaagcc caagacgctt gaggggcagg cccagctga ggccgcccgc tccacaccca 180
 aggttgccgc cgaggccact ccaatctccg ttgaggttgc ggctgatgaa caggtagctg 240
 agaaggtggt ggtggaggag ccggtgcgg cgcccgacgt tgagcatcag aaggctaatt 300
 aggtggtcgc tccagaggcg gccgtcggcg agcccgatca caaggaggag gaagccgtgg 360
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<210> 2341

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-A6

<400> 2341

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 cgcgtcgtcc atgtgatcgg cgtgcgaccg caagccaaag gcggccacca aagcggaccc 180
 ggctgggacg gcctcatcga tctccggtgg tagcggcagc catgaagctg gcgcagagga 240
 agcagcggta gaggaggaag tggtagggct gtcgccggag ctggcgatgc acggcgccat 300

cgagccggtg gcgctgccgt cgtcgacgtc gaggcggcgg ctgtccatca acgtgagcaa 360
gaagctgatc ctgaatatct cggacaagct gcggtgacc cggcaggagc acaacga 417

<210> 2342
<211> 438
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-036-Q1-E1-A9

<400> 2342

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acaagacaga agaatactcc catgacgcc acaacaaatt caacatttac cctgagcaaa 120
tcccttctctg gcttggtgac tggattcctg agaaaggagg ttaccttata gggaatctgc 180
agccagctca catggatttt aggttcttct ctcttggtgaa cctttgggcc atagcttcgt 240
ctctaactac tccaaaacaa gctgagggaa ttcttagcct tattgaagaa aaatgggatg 300
atcttgtagc aaacatgccc ctgaagatat gcttccctgc aatggaagat gatgaatggc 360
gcattattac tggcagtgat cctaaaaata ccccatgggc atatcataat ggtggatcnt 420
ggccaacctt attgtggc 438

<210> 2343
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B10

<400> 2343

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tgggtgtcgt ccttgacgag ctcgtcgccg gcggtcatg cgggcccccg aaagtgccgc 120
ccggtcccaa catcaccacc aactacaacg gcaagtggct caccgccagg gccacctggt 180
acggtcagcc caacggtgcc ggcgtcctg acaacggcgg tgcgtgcggg atcaagaacg 240
tgaacctgcc accctacagc ggcattgacg cgtgcggcaa cgtccccatc ttcaaggacg 300
gcaagggctg cggctcatgc tacgaggtga gatgcaagga aaaacctgag tgctcgggca 360

atccagtcac ggtgtacatc actgacatga actacgagcc tatcgctccc taccacttcg 420

<210> 2344

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B11

<400> 2344

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gactactaca tgggtggcctc cacgcgggtc atccacgacg ccaagtcgcg ctccgccgtc 180

atccgctacg ccgggtccag cggcgccccg ccggcgccca acatgaccga gccaccggcc 240

ggctgggcct ggtccatcaa ccaggccagg tcgttccgct ggaacctgac ggccagcgcc 300

gcgcgcccc aaccgcaggg ctctaccac tacggccaga tcaacatcac ccgcaccatc 360

aaggtcatgg tctcccgcg ccacatcgac ggcaagctcc gcta 404

<210> 2345

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-035-Q1-E1-H4

<400> 2345

taaagtgagt cgtcactatt tccgacattc acagggggga caggaaatca gcggccatgg 60

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gcaccgccgt cgacaacgac ctccccgact acgtcatcca gggccgcgtc tattgcgaca 180

cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc aaggtgaggc 240

tggagtgcaa gcacttcggc accggcaccg acgggaacgg cacgtacacg atcgagctca 300

aggacagcca cgaggaggac atctgcgagg tggctcttgg ggagagcccg cgcaaggact 360

gcgaccaggt gcaggcggac agggaaacgc ccggcgctct gctcnacang aacgtcggca 420

tcagcgacaa cctgcg 436

<210> 2346
 <211> 450
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-G4

 <400> 2346

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 ggcggtggcg gagatctgca tgaagactcc gtccccgcac ctgtgcacca ggacggcggg 180
 gaagcacgcc aacaagtaca aggtggtgga cgcggtgacg gtgctagaga tgcaggtgga 240
 cgcgttcaag aagcgcgtga aggcggcgcg gaggtcgcgc aaggaggagg tcaagacggc 300
 cgcgacgccc gaggcgcgga gggcgctgaa cctctgcaag acctactacc tggacgccgc 360
 cgacaacctc ggcgcctgca agcgcgccat cggcttccgc gacgcccgtc acatcggcgc 420
 cacgatgagc atggtggcgc aggacacgca 450

<210> 2347
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-G5

 <400> 2347

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 gacaaccagc ctgctggcgc tggcgctggc agcgtggtt ttcgtctcca gggccgcggc 180
 gcagggcaac ggctgttcca gcgtgatgat gacctggcc ccgtgcatgg acttcattc 240
 cagcaaggcg tcggagccgg ggatctcctg ctgctcgggt ctggccggag tcgtgcagac 300
 cgacccccgc tgctctgca tgggtactgga cggcactgcc acgtccttcg gcategccat 360
 caaccagacc agggcgctgg agtccccgg cgtctgcaag gtcaaggcgc cgccgctcag 420
 ccagtgcaca ggcgtccctg c 441

<210> 2348
 <211> 433

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-035-Q1-E1-G6

 <400> 2348

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 cggcatcagc gacaacctgc gccccgcaa cccgctcggc tacctcaagg acgtgccgct 180
 gcccatctgc gcctcgctgc tcaaacagtt ggactcggac gacgacgacg atcagtaata 240
 gcacatcgac gacgacgac gatatgtaat agcacgtcgt cgacgaccga ccgcagtcgt 300
 cgcagactgg ctggcactaa accacaaatc ctcttcacct ggattacaaa tatgtaactg 360
 agaaaggaaa ggaaaacaaa aatgtaactg cgtggctgtn acaaattctg agtgctggat 420
 tcttgctatt gtc 433

<210> 2349
 <211> 415
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-G7

 <400> 2349

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 gccagcaggt tcagccgttc ctgttcttgc taaaacgaga gaaggatggc agtgtctcag 120
 ggagctgtcc tattcttggt tctcctcgtc gcagcagagg tgggaaccat cgatgccaaa 180
 atgggagtag ccatgcccat gcatgccttg ataatggaga aagcgaaaca gcaggagacg 240
 gagaagaagg aggagaaaag cacggagaag gaagagagtc aatgcttata gccgagtctc 300
 cagttcgagg gcttctgctt caacagcgac agatgcgccg atgtgtgcat gaaggagagc 360
 tttcccggtg gcgagtgcaa gcaggctgtg gccacgcgca agtgcttctg caaga 415

<210> 2350
 <211> 456
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G8

<400> 2350

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ctcctccgac tcagcatggt cgccgtcgtc ctggctgcca tcgccacagt agtgctcgcg 120
gaggaagccg atccgcgggc actgccggca cagtggacca ccgcgaagaa gtacaaggcc 180
acgatggacg ccaagacgcg gcaggctttc gacggcgtgg tggccgcccgc tacggcagag 240
aagcgggtccc aggcgggtgga ggccgtgctg cagcagcagc tgaacatgga cgtgtccctg 300
tccaaggcga cgtcttccgg ggacgagaac aactacgtga gcgtggcccgc cgcctacgag 360
aaggccgcgg gcgcggtcat cgccggcagc ccggacaaca agctccgcgc tatggcggtc 420
gcgttcgacg gcgcgggtggc gccggacccg ggccgg 456

<210> 2351

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G9

<400> 2351

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ctcaacatct tcaagccgcg gaacgagcac gactacttcc acaacgcgaa ccaggaggag 120
gatgtgatgc cccggggccag cgaccagcag aacctcataa cggcgccggt gaccaagagc 180
ggcctcatga aggtgccgcc ccggtccgcg cccaccgcgg ttgcgcagga cacggtggtg 240
ctccccgtgg acaacgcgcg ggggttcccc ggcgcttggt ccatcatcag cgagaacgcg 300
ggcgtgtccg cgatgcacct ggtgatcatg cggagcgaca aggccatcat gttcgacacg 360
gtcaccacgg ggccgtcgct gctgcggctg cccaagggga actgccgcct cga 413

<210> 2352

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H1

<400> 2352

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 aaatctacca ccagcagagc ctgaagagcg gcagggagcc cgacgeggcc ccgtcgggtcc 120
 gcgacgacaa ggacatgata ggcagcgagg ggaccggcgc gcccgggccc ccctcgtgat 180
 gaggaggagg tgggtggggcg acacgtccag acatccgagt cggtcgctgt agtcggggat 240
 ggccctgtcg cccgccctgc agcccatcac agcgagggtg ccgtcgccgc tgctaggatt 300
 ggtgtgtgtg tgccgtgtgc gtgtccgtgt gtgcattctt tgggggtgtg taacgtgatg 360
 tgatgtaaag agaagaggaa ctgcatcggg ttgggttggg ttggt 405

<210> 2353

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H10

<400> 2353

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 ccacgcccc ttccaggctc ccgtctccat ggggtctctc tcaaacagga ttgggagggga 120
 gagcctcaag gcgggggata atatctactc ctggagggcg gcgtgggtct acgcgcatca 180
 cggaatatat gtgggcgatg ataagtgat ccatttcaca agaggaagag gacaggaggt 240
 cggaacagga actgtcgtcg atattattct tgtgagttcc accccaaaac gaagcaacac 300
 gccttgcccc gtgtgcaccg acgaaaccag cgacagcagc acagagacga acggcgtggt 360
 atcctcctgc ctcatctgt tctagctgg ggggtgtctc taccgtt 407

<210> 2354

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H11

<400> 2354

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 agcaggtctg acaggatgtc gtggcagaca tacgtcgatg agcacctcat gtgcgagatc 120
 gagggccacc acctgacctc cgctgccata gtcggccacg acggcgccgt ttggggccag 180

agcaccgcat tcccacagtt caagacagag gagatgacca acatcatgaa ggacttcgac 240
gagcccgggt tccctggcccc gaccggcctc ttcctcggcc ccaccaagta catggtcac 300
caaggcgagc cgggcgctgt catccgcggg aagaaggat ctggaggcat aactgtgaag 360
aagacagggc aagcgatggt ggtcggcatc tacgacgagc ccatgacccc cgggcagtgc 420
aacatggggg ggc 433

<210> 2355
<211> 384
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H2

<400> 2355

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tggtggctgt caaggttatg gtggtacaat gattgcacct gacctctgc gacgccctca 180
cccacaccag cgacccctac gtcttctctc gcctcggaca gcagacagtc gcatcaagtc 240
tgtcatcccc catgatgat ctgctgcagg acgagctgct catgctgttg tcccagtcca 300
tggtgacgtc gtccggggat gagcactact acctgagcat ggccaccgcc tacgagaacg 360
ccgcggggcg cgtcatcgcg gcga 384

<210> 2356
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E6

<400> 2356

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gccgtctcc gcctcggctt cttctctctc ctctgggccc cggcgttcgc gccgtggctc 120
tccgcgcagc tctctgcaga tttctacaag acgtcgtgcc ccgacgccga gaagatcacc 180
ttgggcgtcg tcgagaagcg gttcaaggcg gaccccgcca ccgcccggg cctcctccgc 240
ctcgtcttcc acgactgctt cgcaaacggc tgcgacgct ccatcttgat cgaccccatg 300

tccaaccagg cctccgagaa ggaggcgggc cccaacatct ccgtcaaggg ctacgacgtg 360
 atcgaggaga tcaagacgga gctggagaag gagggtccca acgtggtgtc gtgcgcggac 420
 atcatccccg gtaacgccgg cgactc 446

<210> 2357
 <211> 406
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-E8
 <400> 2357

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 agataaataa agatgaagaa agtggcatca tcgtcagccg ttctcttcgt gctagccctg 120
 acgctagttt gtgccccgct gatagcagag gcaaagaaga agagagtcgc cgccgccgcc 180
 gccgaggaga agaagggtgca ggacaacttc tgctcgacgc tgtgagaggg caggaagggg 240
 atggacctgg tgggtgtgca ggagtcctgc gacctctcac agcgctccaa cctggtgctg 300
 tacggccgga tccagtgcaa gggcaagtgc accgagcaga agggcatcac cgcgccgcag 360
 atgaagggtgt gccaaagggc gtgcgacaag gactacgtgg tcaaag 406

<210> 2358
 <211> 385
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-E9
 <400> 2358

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 cttgtcccgc cttgccgctg cccgccgtcc ccgcctcgct cgcaagtcga tttcccgcag 120
 cgatgttgga cagctactag cactcggaca cattgatcgt gctctccacc gtgcagagca 180
 gctcatagag gaggacaaca tgctggaggc gttcaacata atagagctac actgcaatcg 240
 cctcattgag tgcgcaaagc agctagacaa gcccattgaa tgtgggtgatg acattcggga 300
 ggcagccgcc gggatcatgt ttgcagctgg gaggtgcggc gacctgccgg agctgacgtt 360
 tgcacgaacc atactgacaa acaag 385

<210> 2359
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F11

<400> 2359

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gggccgggac gggaccgaac ggaagcctac gatcgactgt acatacaggg gttgggactt 120
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gagagccagc gagcagtctc tcgtgcagtg cagtgcagtg cagtgcagct ccggcgtaga 240
tgagattgta ttgtgaccaa gccgggaggg aaagcagggg ggggaggaca aagatgtttt 300
gtcacgtttc aggctccggc catcgccgga gtttgtccgg ggaatatatc gatttcctat 360
tagaaatccg caaaaaaaaaa ggaagaagaa agagaggaag agtat 405
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<210> 2360
 <211> 456
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F2

<400> 2360

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cgatgcgaaa gcgtccgggc ctggtgggtc cttcgacatc accaagttag gcgcctccgg 180
caatggcaag acagacagca cgaaggctgt gcaggaggca tgggcatcgg cgtgcggcgg 240
cactgggaag cagacaatcc tcatacccaa gggcgacttc cttgtcggac aactcaactt 300
cacaggccct tgcaagggcg acgtgaccat ccagggtgat ggcaatctgc tggcgaccac 360
ggacctaagc cagtacaagg accatggtaa ttggatcgag attctacgcg tggaaaaacc 420
tggtcatcac cggcaaggga aaccttgacg ggcagc 456
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<210> 2361
 <211> 418
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F6

<400> 2361

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cggcgagaag gagaaggaga aggagcagga gatggagaag gcggtcgcgg cggagaaggc 180

tgcccagcag gagctgctca agtacgcca ggagaagggc atcgtgtcac cgaccaacgg 240

cacggggtgg tacaagggca tcgcccggga gttcgtggac gccacaacg agctccgcgc 300

gcgctacggc gtgccgcca tgaagtggga caggaagctg gcgcggcagg cgcggcgctg 360

gtccaaccgc atgcgcaagg actgcgagct cgtccacagc ggccacaagt acggcgag 418

<210> 2362

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F7

<400> 2362

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acacgtacat tcaccggcg gcaataatgg cctcggttcc ggctccggcg acgacgaccg 180

ccgccgtcat cctatgccta tgcgtcgtcc tctcctgtgc cgcggctgac gaccgaacc 240

tccccgacta cgtcatccag ggccgcgtgt actgcgacac ctgccgcgcc gggttcgtga 300

ccaacgtcac cgagtacatc gcgggcgcca aggtgaggct ggagtgaag cacttcggca 360

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agctc 425

<210> 2363

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-F8

<400> 2363

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caaggacgag aaggacgtca cggacatcaa cgtcaaggat tgcactctta agaagacgat 180

gttcggcgtc cgcacaaagg cgtacgagga cgcgcctcc gtgctcaccg tctccaagat 240

ccactacgag aatatcaaga tggaggactc agccaacccc atcttcatcg acatgaagta 300

ctgccccaac aagttgtgta ctgccaacgg cgcctccaag gtcaccgtca aggacgtcac 360

cttcaagaac atcaccggca cctcctccac cccggaggcc gttagcctgc tctgcactgc 420

caagggtccc atgcaccgcc gtcacaatgg a 451

<210> 2364

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C9

<400> 2364

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gccggcgatg ggggagaccg tacgggcggg cgacgttgca atcacgactc acgagatgga 180

gagccacaac ccacgcact ctcagatcgc cgaagtgcg atggacatcg cagcgtcagc 240

ttctggagcg gcaggagca agttctgcaa gggcgcagcc tgcgacttct ccgacgccag 300

caactcctcg aaggacgcca gggagaggtc ggcgtcgatg aggaagctga tagtcgcggc 360

ggtcctctgc gtcgtattca tggcgggtgga ggtgggtggg ggcac 406

<210> 2365

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D10

<400> 2365

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gtcaccctgg tgtcggcaaa tgacctcaag aaagtgtcgc tcttctcccg gactcgcac 120
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 ggcgatcgcg acatcggcga ggtgtttgtg cccatcgacg acctcctggc cggcgccgac 360
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 ca 422

<210> 2366
 <211> 367
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D11

<400> 2366

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 acccaataat ccgatccac agaaactttt ctctcggctc gttcgatcga tcgctgccgt 180
 gtcgtttgcc agacaccatc agcaccaaa accatggcct gcaacctggc tcagtgcgcc 240
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 tccttctccg cgaggaagcc ggcggggcggc agcctgcggc tgcagcggca ggcgtgctgc 360
 gagccgt 367

<210> 2367
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-D12

<400> 2367

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 gtcgtgcggg cccccgaagg tgccgcccgg ccccaacatc accaccaact acaacggcaa 180

gtggctcacc gccagggcca cctggtacgg tcagcccaac ggtgccggcg ctcttgacaa 240
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 cggcaacgtc cccatcttca aggacggcaa gggctgtggc tcatgctacg aggtgagatg 360
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<210> 2368
 <211> 402
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-D3
 <400> 2368

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<210> 2369
 <211> 409
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-D6
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 ctacggcgac ttcaccgaca gcctccccgc caacgagtgc cgctacgcga tctacgacct 300
 cgacttcacc accatcgaga actgccagaa gagcaagatc ttctttcttct cctgggtcccc 360

tgacactgca cgcaccagga gcaagatgct gtacgccagc tccaaggac 409

<210> 2370
<211> 244
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E12

<400> 2370

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ttcttaggcc gccctctaca cttctcgaca taaccatcga gagggcggtc gagagaaacg 120
agagcggcgg acaccatggg gagctcgagg accatcggtg cgtcccgctt gctcctctc 180
gcoctcctcc tcctgggttt cgcggccacc gccgagcgcg gcgttggtccg cgagctgtcc 240
gggg 244

<210> 2371
<211> 384
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E2

<400> 2371

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gaagtaacac ttctccgtga ggctgagcc cctcgccgcg gtgagccaag ccggcgccacg 120
tcgccccggg gtcacgctc accaccgagc cccaaccaat taataatata tatatatagc 180
taggatcgat cgtcagtaaa atggcaggct ccgcccgtct gaggagcccc ctgtccgtcc 240
tcctctacat cctcgccgcc gtgcccgcga ccgcccggcg gacgccgacc gacgccgcga 300
tcgacgaggg gtacgcgcgt ctcgtcaacc tcaccgcgaa tcaggagtac tgggcggagc 360
gcgcggaggg ggcgcacgcg taca 384

<210> 2372
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-E4

<400> 2372

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tcctcctccg actcagcatg gtcgcgctcg tcctggctgc catcgccaca gtagtgctcg 120

cggaggaagc cgatccgcgg gcactgccgg cacagtggac caccgcgaag aagtacaagg 180

ccacgatgga cgccaagacg cggcaggctt tcgacggcgt ggtggccgcc gctacggcag 240

agaagcggtc ccaggcggtg gaggcgctgc tgcagcagca gctgaacatg gacgtgtccc 300

tgtccaaggc gacgtcttcc ggggacgaga acaactacgt gagcgtggcc gccgcctacg 360

agaaggccgc gggcgccgtc atcgcggcga cgccggacaa caagctccgc gctatgg 417

<210> 2373

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B3

<400> 2373

gtcgatgcaa gcctctacag tgactcgtat tatgttcggc gtccgcatca atgcgtacga 60

ggaagccgcc tccgtgctca tcgtctccaa gatccactac gagaatatca agatggagga 120

ctcagccaac cccatcttca tcgacatgaa gtactgcccc aacaagttgt gtactgccaa 180

cggcgccctc aaggatcatg tcaaggacgt caccttcaag aacatcaccg gcacctcctc 240

caccccgag gccgttagcc tgctctgcac tgccaaggtc gcatgcaccg gagtcaccat 300

ggatgacgtc aacgtcgagt atagcggcac caacaacaag accatggcta tatgcacgaa 360

cgccaagggc agcaccaagg gttgcctc 388

<210> 2374

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-B6

<400> 2374

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agataaataa agatgaagaa agtggcatca tcgtcagccg ttctcttcgt gctagccctg 120

acgctagttt gtgccccgct gatagcagag gcaaagaaga agagagtcgc cgccgccgcc 180
 gccgaggaga agaaggtgca ggacaacttc tgctcgacgc tgtgcgaggg caggaagggg 240
 atggacctgg tgggtgtgcaa ggagtcctgc gacctctcac agcgctccaa cctgggtgctg 300
 tacggccgga tccagtgcaa gggcaagtgc accgagcaga agggcatcac cgcgccgcag 360
 atgaaggtgt gccaaagaggc gtgcgacaag gactacgtgg tcaaggcggg ctgaggtcac 420
 aaggcctgca acaacaactg cgccaa 446

<210> 2375
 <211> 399
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-035-Q1-E1-B9
 <400> 2375

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 aatggctgac ggcgaggaca tccagccctt tgtttgtgac aatggaactg gcatgggtcaa 180
 ggctgggttt gctgggtgacg atgcgccaaag ggctgttttc ccaagcattg ttggacgccc 240
 acgtcacact ggcgtgatgg ttggcatggg gcagaaggat gcgtatgttg gcgatgaggc 300
 tcagtccaag aggggtatcc tgactttgaa gtacccgatc gaacatggca ttgtcaacaa 360
 ctgggatgat atggagaaga tctggcanca caccttcta 399

<210> 2376
 <211> 408
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-C10
 <400> 2376

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 cttatccgtc ctcttctgtg ccgaggctgg caccgccgtc gacaacgacc tccccgacta 180
 cgtcatccag ggccgcgtct attgcgacac ctgccgcgcc gggttcgtga ccaatgtca 240

cgagtacatc gcgggcgcca aggtgaggct ggagtgcaag cacttcggca ccggcaagct 300
 cgagcgctcc atcgacgggg tgaccgacgg gaacggcacg tacacgatcg agctcaagga 360
 cagccacgag gaggacatct gcgaggtggt cttggtggag agccccgcg 408

<210> 2377
 <211> 418
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-C11
 <400> 2377

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 gggctccgtc tgttccgtcc atccaccgcc ccggctcgtc ccggccaga tccctctcct 120
 gcaaggtttc tttgcgagtg gccggagaag atgatgggcg ggttcctctc cagggtcctc 180
 ctgctggcctt ttggctatgc ctatcctgcc tatgaatgct acaagaccgt tgaactgaac 240
 aaaccacaga ttgagcagct catatcttgg tgtcagtatt ggattttagt tgccctgttg 300
 acagttttgg agagatttgg agattttaca atatcatggc taccgtttta ctcagaagca 360
 aagggtgttg tctttgtata tttgtggtac cctaagacaa agggaactac gtatgttt 418

<210> 2378
 <211> 393
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-035-Q1-E1-C3
 <400> 2378

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 cccatcaaat cgtaaactt gttagatcgg tacgcataca gaagccagac tgatgggaat 120
 ggcagcgaag gagcactttg tgcattgttc tgggtgaagg catggagcct ggtgctggat 180
 caagctccgc tggctccttg aggggtgctg ctaccatgtt acatgcattg acctaatcgg 240
 atgcggcgtc gatcctactg accccaacac aatccggtcg ttccagcagt acgataagcc 300
 actcatatac ctcatctcaa ccttgccgga gggggagaag gtgattctaa tcggacatgg 360
 tgctggatgg ctgactgtga ttcattgcaat gca 393

<210> 2379
 <211> 454
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-C6

<400> 2379

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 ctcaogacga tagccgagga attcgaagga ccgaacgaga agctcctgcg tgggtgtcaac 120
 gtctacccta ccgtaccagc tagccaccac acgcgtagcg cgggaaatgc cggcggcggc 180
 ggccatgacg acgaggcggg tgggtgctgga ggtgctacgg tcggcctccc gcgacgcctt 240
 ccaggtggcc ttctccttcg cggcgaggcc gcccggtgcc accatgctca agccggccat 300
 caccaagccc ctctaccacc accaccacga caacgactaa tctggcgag atctacagca 360
 cggcgcgctcg catgccttca cagcccgggtg ggtgtgacga ctattgatga cgtactacca 420
 catttcgctg ctctaatcc agtaagcaac gcaa 454

<210> 2380
 <211> 450
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-035-Q1-E1-B2

<400> 2380

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 gcccctatggc cgccatggct cgttcctgtct cctcgtcgt ggcgcccctt ctctcctct 120
 cctcctcgt ctccgccgcy gccagtgcgc ggaccgtggg cgacaccgtg caggacgcgt 180
 gcagcaagac ccagttcccc aagatctgcy tggacagcct cgccgccaag ccggagagcc 240
 agaaggcgac gccgcgcaag ctggcgagc tgttcgtgaa catcgcgcc gagaagggat 300
 ccgggatggc caccttcgtg caccgcaagt acagcgacaa ggaggacagc gacatattca 360
 agtgctacga cagctgtcc gacgacgtg aggaggccgt cgnccactc aacggcctcg 420
 tccgggagcc caccgacgcc aagttcctcg 450

<210> 2381
 <211> 96
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H8

<400> 2381

aattcccagg caggcaggtc cgcgaggatg gcaggaacac cgaagaccga tccgtccggg 60

ggctctggac aggaacagga caggacctca aaatct 96

<210> 2382
 <211> 359
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H9

<400> 2382

gggccgaccc aaacgtccag gcagagtcgt gcagctactt ccagaagacg caggacggca 60

ccgtgacgat cggcatctat ggcaaggaga aggcgacggt gacggtgtcg gacgggcgga 120

tggccaggct ccccggtctc atcctgagct gctccgtcct ggaggccggc ggcagcgtgg 180

acgcccacga cggcgtgctg tcgctgggga acggcgacat gtccttcgcc gtccacgccg 240

ccaagecgtt cgggcagcgc ttctccttct gcctgctcag cgccaacagc tcccgcgacg 300

cctccagcta cctcaacttc gggcccaacc cggcggtgat cggtcggggc accatggag 359

<210> 2383
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-A10

<400> 2383

gggtcgatgc acgcccctag actgagtcgt acaaccgcgc ccgcagtcgc cggcgacggc 60

ggtgtcgtcg ggcgcgcgca agcccaagtg cgtggccggc gccaggaacg accacgcgtg 120

ccgcgtcggc gccgtgcacg acccgacag ccaggaggag gagggctcca gcgtcaccat 180

cgacgcgccc gccgcgcgc ccgacgacgt cggccacgac gacggcagcg actacaacga 240

ccccgacgtg cccaacaacg accagctcgt cgtcgtcggc cactgaaagc tgccgcgcgc 300
gcgcgcgcgc cgacccgtgg accatgcgtg catgaagaag aatgcagggg gtgggcctgg 360
gcctgtaacc tgttaatgga tcg 383

<210> 2384
<211> 412
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-035-Q1-E1-A11
<400> 2384

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tggtcgtcga tgcgggcaca tgttgcgatg gctgtggcgt tggtgttctt ggtgagcggc 120
gcatggtgcg gtcctcccaa agtccccca ggcaagaaca tcacggccac ctatggcaag 180
gactggttgg acgctaaagc gacatggtat ggcaagccga cgggtgccgg tcccgacgac 240
aacggtggcg gctgcgggta caaggacgtg aacaagcccc ccttcaatag catgggcgca 300
tgccggcaaca tccccatctt caaggatggg ctgggttggtg ggtcctgctt cgagatcaag 360
tgcgataagc ctgtggagtt ctccggcaaa cccgttggtg gtgcacatca cg 412

<210> 2385
<211> 399
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-035-Q1-E1-A7
<400> 2385

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tgtggcttct tcggcagcgc ggcgaccatg aacatgtgct ccaagtgcc caaggagatg 120
ataacgaagc aggatcaggc caagctggct gcctcctcta tcgacagcat cgtgaacggc 180
agcgacgccg tcatggagcc ggttggtgct ggcagcaaca cggtagtagc tgttgcccaa 240
gttgagttgc aaacaatgaa cgtgcagcag cccgctgatg ttgccggacc cagcgagggg 300
gtggcggcga tctccaaagg ggggaaggta nggccgaacc ggtgcagcgc ctgcaggaag 360
agggttggtg ttacgggatt caactgccgg tgtgggaac 399

<210> 2386
 <211> 408
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-A9

 <400> 2386

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 ccgctccggt ttaattttctc ctcgaccggc cagcgcaatt ctgtggctcg atcgatcggt 120
 cggtcgtaag gcaagtgagc aagctatata tatatatagg agattcttcg agcgagctag 180
 tagcgagatg ggttccgccg tcctctttta ctgcatctgc atcgccgctg tcgtcgcaatt 240
 gtcgtcgtec atggtcgccg tcggggccgc cgccccgggg gaaaccccca agttcatctc 300
 ggcgagcgcc cttgagtgtc ccgctaacgt aacggaaata gcaaaggcgc gcaagctgat 360
 cgatgtccat ggccacgggc tgtgcccggt gcggttcgac cacacgcg 408

<210> 2387
 <211> 397
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-035-Q1-E1-B11

 <400> 2387

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 gtgccataat gttcaaggac tgggtctgggc agagtataag cagtattgcc tctgagattt 120
 gtgggtttct tactgtgctt actggtactg ttgtactgca ttctacaaga gaacatgata 180
 caacccttac ttcagatctg tatgtctctc tttccccaat atattggcat atccaaggta 240
 acggtgaaac aggaggaaag ctgaaagagg atgatttact ctctggcaat ttcatactg 300
 tgggtgcgaca agactacttt gtctagagac cttccacgat gctcaatgtt ctggattaaa 360
 agaaaagaga acaacactac ggaaggatcc tactgat 397

<210> 2388
 <211> 387
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H6

<400> 2388

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gcctctcctg gcgtcgatgc tgctcgtctg gctcgccgtg ggctccgaag agggggagga 120
ctgcggcggc aaatagaaac cccaagtcag gcactgcaag tttaaggcgg agccgtggat 180
ggacggggcac gctacgtact acggcgggcg cgacgggtta actgacacca cggactgcgg 240
cacgtgcggc tacaagggcg agctggggaa agactacggc accctgacag cggccgtggg 300
cccgtcgctg tacaccaacg gcaccgggtg ccgcgcgtgc tatgagctca agggcccca 360
cggcaccggtt gttgtgacgg ccaccaa 387

<210> 2389

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-F2

<400> 2389

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aatgtcgcag tgaaggcggc ggccgtggcc gcgctgctgc tggtcgcagc ggtgtgcct 120
gccgcgcgcg cggcggcggt ggcggtggca ggaggggcgc cgtcggtgcc ggcgggtccg 180
ctggacatcg cgcagctggg cgccaagggc gacggcaagt cggacagcac cccgatgac 240
ctcaaggcgt ggaagaacgc gtgcgaggcg acgggggtac agaagatcgt catcccgcgc 300
ggcaactacc tgacgggcgg gctggagctg aagggcccct gcaagtcctc catcatcatc 360
cgtctcgacg gcaacctgct cggcacccgc gacctcagcg cgtaccagag gaactggatc 420
gag 423

<210> 2390

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G1

<400> 2390

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gatcgaatta ggcgccttct tcgtcccacg ctccgtcttt atttgaatc tgaagcttac 120
aggaacattt gagtggatca tgggggggatt ggtaggcctc ttgaaagtcg gggtaggtgag 180
gggcatcaac cttgcctacc gcgacgcaag aggcagcgat ccgtatgtcg tcctacgact 240
tggcaagaag aaacttaaga cgagcgtgaa gaagagatct gtgaaccca tctggcacga 300
ggagctaact ctgaccgtca cagatcccag cctagctctg aagctggagg tgttcgacaa 360
ggacacggt 369

<210> 2391
<211> 222
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G2

<400> 2391

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attccactac attctataag gtcattgactc agtgtcctgg gtgtggctca gtatacacc 120
caattcttga tgtcgtcac acaatgcatt atggaaaatt ttacatttt cctgttcttg 180
acatggatgg aaatcttgtg actgtttttg atgttcttca ca 222

<210> 2392
<211> 378
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-034-Q1-E1-G3

<400> 2392

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tccggcgcg ccatccacca ccatcgccac cactcttcgc cggctgaggt cgtgggcgtg 120
gccacggcgt cgatcgggaa ggggcttacg tcgtgcgtgt gcgcgcaggg gacggagagc 180
gacgggcgcc tctccttcga tttgagtccc attcaggaag agtgcttgca tangttgcag 240
aaccgatag aggtgcagta tgatggttca aatctagagc atcagaaagc actggtgggc 300

ctttggcatg cttcttttcc tggaactgaa cttctaggat tagtatcaga ccaatgggag 360
gagatgggat tgcaaggg 378

<210> 2393
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-G6

<400> 2393

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tgaccctgaa atcaaggatg aggtgggtcga cagctccctt gaattcctca tcgtggcgag 120
tgatggactc tgggatgttg tcaactaatga ggaagctgtt gccatggtca agcctattca 180
ggacccccag gaagcagcaa acaagcttct cgaagaagcg tcccgaaggg gaagctctga 240
taacatcacc gttgtcatcg tccgcttctt atatggaact accggtgata aatcaggcgc 300
agacaaagag accaccaatg accaaaactc ctaattgcct cctgtaggga tccatcatgc 360
gtgtgttttc ttctggctgt tgtatctgat gctcaaagta gatgctccgt gtgtc 415

<210> 2394
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-H10

<400> 2394

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ttttttttatt ttaaaatttt ttttgttttt tttattttat tttttttatt ttgttttttt 120
ttttgttttt tttttttttt tttttttttt tttttttttt tttttttttt gttttttttt 180
tttttttttt tttttttttt tttttttttt tttttttttt tttttgtttt tttttttttt 240
ttttttttatt attttttttt ttttttttat ttttttttgt cttttttttt tttttctgta 300
tttttttttt ttgttttttt tttttttttt tttttttttt ttgttttattt tttctttttt 360
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt ttt 413

<210> 2395

<211> 107
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-034-Q1-E1-E8

 <400> 2395

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 gantcccaga agcatgacg gctgctgcac accacctgcc gcacccc 107

<210> 2396
 <211> 173
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-034-Q1-E1-E9

 <400> 2396

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 attccacaca ctttttgtcc ggggttggcgt tgttccctct ttctcaaaa tttagecgaat 120
 tgattcattc cgcttatgtt cttccctga cagatggatt aacacttgta tca 173

<210> 2397
 <211> 307
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-034-Q1-E1-C9

 <400> 2397

 acccaaacgt caagagaaag gcaaggaaat tgggaaggta ggagagagag ggagacaggg 60
 aaagctctct tcatcctcat catcatctcg aattccgtct cttgtccctg tcgtgggcgg 120
 ggggtttcca cgttttttga aaggggaaag aggatgcgga ggagagggat ggggagggac 180
 gagaggttcc cgtgtggga ggccgcgctc ggccgctgag tcgccgcgc cttcgccgct 240
 ggactcgtct gtgtctagct ttccatgccg gactcacact acagattcct caagtttcca 300
 cgtaatc 307

<210> 2398
 <211> 264

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-D12

<400> 2398

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 gaaacgaaac ccccttggcg acccacacat caccaaggaa ggaacgaagg ggggaggagc 120
 agacgatcac ataattaagc aaccgcaggc aataaataaa taaataaaaac aacgattaat 180
 taattattaa tcgggtgaac caaacacgat gctccatccc aggtttccag cactccgcgc 240
 ggtacgtcgc tcagtcgagg aagg 264

<210> 2399
 <211> 406
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-B9

<400> 2399

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 gcgggagggg cgccgtcggg gccggcgggt ccgctggaca tcgcgcagct gggcgccaag 180
 ggcgacggca agtcggacag caccctgatg atcctcaagg cgtggaagaa cgcgtgcgag 240
 gcgacggggg tacagaagat cgtcatcccg ccgggcaact acctgacggg cgggctggag 300
 ctgaagggcc cctgcaagtc ctccatcatc atccgtctcg acggcaacct gctcggcacc 360
 ggcgacctca gcgcgtacca aaggaaactgg atcgagatcg agaacg 406

<210> 2400
 <211> 276
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-A3

<400> 2400

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atgctgtatg ctctgggagaa cactggcatg acgtattcga ctggacactt tccacacggc 180
atcaacgata tctacagtct ggtacagtcc acgatgactg ccaagcctaa cggaagcagt 240
gttaagcaca gcaacatatc atccatcagt atgcgc 276

<210> 2401
<211> 340
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-034-Q1-E1-B1
<400> 2401

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ccgaccgcca catctattag gtgcagccat ggggtgcctgt gcaacgaagc ctaagacgct 120
tgaggggaaa gccccagctg aggccaccat ctccacaccc aaggttgac ctgagaccac 180
taccatccac attgaggttg cggcaaaaca tgcagtagtt gagaaggtgg aggaggacaa 240
ggaggaggca ctaacagtgg cggcgaaaca agagccagca gccaccattg agcctcagca 300
gattgctagt gaggtgacca ctctcggaagt ggcggtcgtc 340

<210> 2402
<211> 270
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-034-Q1-E1-B4
<400> 2402

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cggctctctt ctacatctc tccgtcgtg cctcggggc gggcaaggca ccggcagagt 120
caccgaaggc aggtagtcct gccattgcac cggccgattc accgagtgca tgcactcctg 180
cagctccttc caatgcaccc gagtctgctg ccactagaac tgcccccgct caggcatctc 240
gagccgctc caaccccggc gcttccgctg 270

<210> 2403
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-034-Q1-E1-B7

<400> 2403

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aataaagatt ttgggtactc caacaagaga ggagatcagg tgcataaatc caagtgggttc 120
cgaattcaag ttccctcaga taaaagccca tccatggcac aagctttttg gtaagcgcat 180
gccacccgag gctgtcgatc tcgtgtcaag gctgctccag tactcaccga acctgcgctg 240
cactgctgtc gacgcctgtg cccatccgtt ctctgatgag ctgcgggacc ccaaggcttg 300
cctgccgaac ggacggccaa tgccaccgtt gtctgacttc acagcagccg aactcgaaag 360
gtccccgcc gagcttggtc accggatcgt tcctgaacac atgaggaagg a 411

<210> 2404

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-H12

<400> 2404

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gggcatggac atgccgatca tgcacgacag cgaccgttac gagctcgtgc gcgacatcgg 120
ctccggcaac ttccggcgtt cccgcctcat gcgcgaccgc cgcaccaccg aactcgtcgc 180
cgtcaagtac atcgagcgtg gcgagaagat agatgagaat gtccagcgcg aaataattaa 240
ccatagatca ttgaaacacc ctaacattat taggtttaaa gaggttattt taacaccgac 300
ccatcttgct attgtcatgg aatatgcctc tggcggtgag ctttttgaga gaatatgtaa 360
gaacgtgcga t 371

<210> 2405

<211> 217

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-H3

<400> 2405

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ccgtgttcgg cgccgcgccc gtggaggtct ccgtgaaggt ggccggcatc cactggcact 120
 accgcagccg gtcccacgcc cgggagctca acgcgggcta ctacaacacg cggcgccacg 180
 acgggtacct caccatcgcg cgcctcctgg cgcccca 217

<210> 2406
 <211> 163
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-033-Q1-E1-H4
 <400> 2406

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 ttctgtttca accaaaccca aaaaccctta agggaaaacc ccaacttaag gcaacaactt 120
 caaaacaaaa ggttcaactt aaaacaataa caacccaaat taa 163

<210> 2407
 <211> 337
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-033-Q1-E1-H8
 <400> 2407

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 agctgcggtc ctctttctaca tctcgcgcgt cgctgccctc agcgcggccg aggcaccggc 120
 agagtcaccg aaggcaggca gtcctgccaa ggcaccggcc gagtcaccga aggcaggcag 180
 tctcgcagct cctgccaaagg cacccgagtc tgctgccacg agaactgccc ccgctaaggc 240
 acctcaagcc gcctccaccc ccgcgcgtgc cgctgcccc tgcgtcgtcgt cgtctaagaa 300
 gtctgggtcca gctgcgcgcg cgaccaccgc cgcctct 337

<210> 2408
 <211> 429
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-034-Q1-E1-A11

<400> 2408

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tggctggagc tactgattca gaagtgcaaa ggcctgcgac ggtttgagtt gcagtgtggt 120
ctgtcattgc tcaggagctg cctcgacggt ggcaagaact ggcattctct gcagcagatc 180
cccgagggtgc gcatcataag ctgcgatggc aagagatact ttcggtataa caagagccgc 240
cgcatctacg aaactaatgc acagtcagaa gaatgaagcc atttctgaaa accttggcac 300
gacactgggtt tgttttgggt cagccacacg tttcagttgt cgctgtccct actttgttcc 360
gggagtattg agagcttgtg ttctgttcac gattgattca ngtgttttcc tttggtttgc 420
ctgggttttt 429

<210> 2409

<211> 354

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-F12

<400> 2409

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atctcctega acgccagggt ccttggacca ctatatccag gagcgacgaa gtgatccacc 120
cgccagccat ggagatgaag aaggtectct gcgcgcctt cgtcgcccgc gcctcggcca 180
ccgccgtgct ggcctcggtc gcttcagagg cgccctccga ggcgcccgc ggcgcggccg 240
gtagtgcagc tggtcctagc gtaagctgcg ccgcggtgc cgccgtgtcc accgcggggg 300
cactcgtcac ctcttcttc gctactaac tccagtgatc gacgacgcgc gggg 354

<210> 2410

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-G4

<400> 2410

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caagggttcat aaattgcgtc acggtcgggg acggcgccctt cggcaagacc tgcattgctca 180
tctcctacac ctccaacacc ttccccaccg actatgttcc gacagtgttt gataacttca 240
gtgccaaagt tgtggttgat ggtaatactg tcaacctcgg cctctgggac actgcaggtc 300
aagaggatta caacagactg agaccactga gctatcgtgg agctgatgtt tttcttctgg 360
ctttctcact gatcagtaag gccagctatg agaatgtttc gaagaagtgg ataccttaac 420
tga 423

<210> 2411
<211> 388
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-033-Q1-E1-D9

<400> 2411
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ggcgccatcg tgttcctctt caccgtcgcc gagtggctgg agacgctggc gtgcagcaag 120
gccagcgccg ggatgctgtc cctcatgtcc acggtgccca agactgtcgt gctggccgag 180
acggggcagg tcgtcggcat gggcgacgtc gcggtcggca ccgtcgtcgc ggtcagggcc 240
ggcgacgtgg tccccgtgga cggcgtggtc gtcggcgggc acagcgaggt cgacgagagc 300
agcctcaccg gcgagtcctt ccccgtgccg aagcagccgc agtcggaggt ctgggcccgc 360
accatcaact tagacggcta catctccg 388

<210> 2412
<211> 389
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-033-Q1-E1-E10

<400> 2412
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tggccgcggc gttcgcgccg ctggtctccg cgcagctctc tgcagatttc tacaagacgt 120
cgtgccccga cgccgagaag atcatcttgg gcgtcgtcga gaagcggttc aaggcggacc 180
ccggcaccg cgccggcctc ctccgcctcg tcttccacga ctgcttcgca aacggctgcg 240

acgcgtccat cttgatcgag cccatgtcga accaggcctc cgagaaggag gcgggcccc 300
 acatctccgt caagggctac gacgtgatcg aggagattaa gacggagctg gagaaagagt 360
 gccccaacgt ggtgtcgtgc gcggacatc 389

<210> 2413
 <211> 293
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-033-Q1-E1-E2

<400> 2413

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 atgggttctt tggtgaccat tgtgacacaa aagagtgggg cttcggtttc agtactgggt 120
 gggagaggca tgattttttg tcaacgaaca atgtcataga agaggtgttc gggaagggct 180
 ccagtgaaga tggaagtgc actgctactg gccaggacct tatctgagcc agaggcggag 240
 gcttcttttc agctgcgaaa ccttttagcag ctcccccttg ttctctgaat ctg 293

<210> 2414
 <211> 356
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-033-Q1-E1-E3

<400> 2414

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 agaaatgaca tccggcctgt gcttcaggtc aaaagtagtg cacacgcaat gatgggattt 120
 gctaattgatg ctttcgtatg atgcgcgcgc ggaaacaagc atgtgaangg tttcatgttt 180
 gaaaaaccgg ttgatctgaa agtangtggtg aaccatgtcg tattgctgtc gtcaactatg 240
 ggaatgaagg atagtgggtg tgaacttgct gaagtaaacg gcggcattca ggagtgccta 300
 atccaaggtc tcaacactgg gacgttggat ttacaagtca atggctgggg ccataa 356

<210> 2415
 <211> 422
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-E4

<400> 2415

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atggctggtg atggcatgga ggtatctgcc agcgggggtg gcggcggcaa caagcagccg 120

cagatcagcc ttttggggct gttcctcgcc tgcattggtc cgggcggcgt gcagtaaggga 180

tgggcgctgc agctctccct tctcaccgcc tacgtccaga cactggggat tctcatgct 240

cttacatcag tcatgtggct ctgtggacct attgctggct tacttgtaca accctgcgtc 300

ggcctctata gtgacaaatg cacttctaag cttgggagac tgaggccatt catctttaca 360

ggatgcatca tcattctgtat atcctgata gtcattcggt tctctcaga catcggttac 420

gc 422

<210> 2416

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-D4

<400> 2416

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aataatgctc aacaaaaagg ttccaagggt cccaagaaac caattcctcc tttccaatcc 120

ttaaaaacac tttaagaaaa attgcaaatt gaaacaacac ttgaagctga catggagaag 180

aaaaatggga caacaatcca catgaagctt gtaaaaaaga aattaaacta ataatttatt 240

ctagtgtcaa agttcataat gactggactt gtactctgtt attatgctat aataatttgt 300

tgaatattag atgatcatgt catgtgctgt tttttttaca ttttttagtga tgttttcattg 360

tgtttttgtt tttctaaata tttcctatct ttctttgatt tttatgattt tttgaag 417

<210> 2417

<211> 132

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C10

<400> 2417

tcgtccgggt gcattgattc catgggtccac catggcgcat ccagatgtgg ccactatgac 60
gactaataag cgactcctcc tcatctcgct ggcgctctcg ggcattcgga cggcgcgaggc 120
ctatgcgatc gc 132

<210> 2418

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C11

<400> 2418

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ggtcgttcgt ggacaataat ggcgcctctc ctggcgctga tgctgctcgt cgggctcgcc 120
gtgggctccg aggaggagga ggacggcggc ggcaaaaaga agccccacgt caaccacggc 180
aagtttaagg cggagccgtg gacggacggg cacgcgacgt actacggcgg gcgcgacggg 240
ttaactgaca ccacggacgg cggcgcgctgc ggctacaagg gcgagctggg gaaagactac 300
ggcacctga cggcgggcgt gggcccgtcg ctgtacacca acggcaccgg gtgcgggcgcg 360
tgctatgagc tcaagggccc caagggcacc gtggtggtga cggccaccaa cg 412

<210> 2419

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C12

<400> 2419

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agtaccgcgc gctgacggtg cggagctga cgcagcagat gtgggatgcc aagaacatga 120
tgtgcgcggc ggaccgcgc cagggcggt acctgacagc gtccgccatg ttccggggca 180
agatgagcac caaggaggtg gacgagcaga tgatcaacgt gcagaacaag aactcctcct 240
acttcgtgga gtggatcccc aacaacgtca agtccagcgt gtgcgacatc ccgccgctcg 300
ggctgcccac ggctccacc ttcgtgggca actccacctc catccaggag atgttcgcc 360

gcgtgagcga gcagttcacg gccattgttc cggcgcaatg ctttcttgca ctgatacacc 420
ag 422

<210> 2420
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-C3

<400> 2420

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aacaaaaggg ttgccgttgg gaatttcctt attcaactgg ggccaacaa taacaacaaa 120
cccgaaggtc cggttaccaa aggaaaacgg gcggccgggg tctggaaaac acgacgaggg 180
gcgcgctact cgcagcaccg cgtgcgcagg ttctggctct ccagacgcc cgactacatt 240
caggccatgg acaagggtgcc caccgaccct aataagtaga cgacgaccat atacccaat 300
gcatggcaag aagatatata tatcagcaca acgcaactgc atgcgatgct gcatgttgct 360
gcaattaatc cactatacta tatactataa gagtattatt a 401

<210> 2421
<211> 250
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A3

<400> 2421

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ctcccctggg ctcaatcggc tctcctcca agaattggctc aacaacgggt gccagcctc 120
caatcccctg gaagaatccg ccgccgggga agttccaaaa aaaggattct ccggcaacgg 180
gttcaacctg gtccgggtca aaaacaacca aatccgcaa ttcaacgtta aaggcaagtt 240
cccccgaaa 250

<210> 2422
<211> 214
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A4

<400> 2422

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ttaagaatgt ccaaattgaa aggctgctcc ggggcgcaac caaacctggc ccaatttggt 120
aagggaacca gaaactggaa atccagaaga acaacctcca acaacctggc cccggccaaa 180
atcccaatta agaataaccg ttcgcctaac caat 214

<210> 2423

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A9

<400> 2423

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ttcacaaccg gaaacggaac ggggggag tcaatctaca gcaggcacat cttctccgac 120
gagaacttca agcacacca cgctaaagcc ggtacgctgt ccatggctaa ctacgggccc 180
gactccaatg gctcccagtt cttcatcacc accgtagacg aaaaccgggt gcccaagaag 240
ctggacgggc gccacgtggt gttcggcaag gtggtgaaag ggatggacgt cgtgcgcaag 300
atcgaagccg agggccagct caccggcggtg cccaaggcca aggtcgatcat agccaacagc 360
ggccagctgc caacgcccgc cgccgcccgc catcggtacc tctga 405

<210> 2424

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-B1

<400> 2424

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acaaaataaa aaggagagag agagagatgg ctctgtcgtc tcgccgtatg gccgccgcac 120
cattcttcgt cgtcgtcctt ctcgtcctcg tggcggcaga gaggacgatg ggcagggtgg 180
tggtggaaga gacgctctgc ttgtcgaga gccatgcctt caaaggcgtg tgcctcagca 240

acaccaactg cgacaacgta tgcaagacgg agaagttcac aggcggcgag tgcaagatgg 300
acggcgatcat gcgcaagtgc tactgcaaga aggtctgcta gggcatgacc ggcagcaagc 360
cccagccgta cggctggttg atccggttgc acaccgtttg ggcacgcggg catgttccgg 420
cttctcggct tt 432

<210> 2425
<211> 200
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-033-Q1-E1-B4
<400> 2425

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agggggaagg gaaaacacct tcattcaacc cgccggaata attggctccg tttccgggtcc 120
cggcaacaac aacggcggcc ttcaccaag cccaatcctt cttctccctt gttgccccgg 180
ttaacaaccc aaacttcccc 200

<210> 2426
<211> 386
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-033-Q1-E1-B9
<400> 2426

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tccgtctgcc gttgtgtcca ttccggggcaa acacacagac ctccgggagcc tgccgcagct 120
ccagcgatcg gaccggaaaa atgggtgggag aacagagaaa ttccaccgcc atgggtccggc 180
gccgcgctc ctctggtgca ctggtaccgc tgccatgtgc cattcagtgc gttggtggga 240
tctgtcatc gtggtgggaa tccaacggcc ctgggtaatt cgggtgtgct cccacatttg 300
gcctcgggtga tcagctacag gattccgctc acatccccag tgcaaatcat gtgctcattc 360
cgggtggatt gattccccgg ggaccc 386

<210> 2427
<211> 354
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-033-Q1-E1-A12

<400> 2427

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tggccggggg catgcaggcg gcggacgcgg cgggcccggct gagcgcgctg ctctcgctgc 180

tcgcgctgcg ccggctcctc gccgtgctcc agccgctggc cctgctcctg ctctgcct 240

tccggtggcg cgcgcggccg gccggggccg tggccgcggc cgtggcgctc gatgccgcca 300

cggcctccgc gccgggggcc agcgggagga aggggaacgc ctcgctcgctc tcgt 354

<210> 2428

<211> 446

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-032-Q1-E1-H1

<400> 2428

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cggacaggtc atcaccattg gtgctgagcg ctteggctgc cctgagggtcc tcttcagcc 120

atccttcatt gggatggaag ctgctggtat ccacgagacc acctacaact ccatcatgaa 180

gtgcgacgtg gatattagga aggatctgta tggcaacatc gtcctctccg gtgggtaccac 240

tatgttcctt gncattgctg acaggatgag cagggaaatc accgccctgg ctcttagcag 300

catgaagatc aaggtggttg ctctccaga aaggaagtac agtgtctgga ttggaggatc 360

catctggca tcgctcagca ccttcagca tatgtggatt gccaggctg agtacgacga 420

gtctggcccg tccatcgctc acagga 446

<210> 2429

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-H2

<400> 2429

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 gcgggtcatg cgggcccccg aagggtgccgc ccggtcacaa catcaccacc aactacaacg 180
 gcaagtggct caccgccagg gccacctggc acggtcagcc caacgggtgcc ggcgctcctg 240
 acaacggcgg tgcgtgcggg atcaagaacg tgaacctgcc accctacagc ggcatgacgg 300
 cgtgcggcaa cgtccccatc ttcaaggacg gcaagggtcg cggctcatgc tacgaggtga 360
 gatgcaagga aaaacctgag tgctcgggca atccagtcac ggtgtacatc actgacatga 420
 actacgagcc tatcgctccc t 441

<210> 2430
 <211> 430
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-032-Q1-E1-F5
 <400> 2430

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 acgcgtagcg cgggaaatgc cggcggcgcc ggccatgacg acgaggcggg tgggtgctgga 180
 ggtgctacgg tcggcctccc gcgacgcctt ccagggtggc ttctccttcg cggcgaggcc 240
 gcccggtgcc accatgctca agccggccat caccaagccc ctctaccacc accaccacga 300
 caacgactaa tctggcgcag atctacagca cggccgtcgg catgccttca cactttcaca 360
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 tcgtactac 430

<210> 2431
 <211> 339
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-032-Q1-E1-G2
 <400> 2431

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tgacgatagc tgctggaagg acgacgacca ccaccctatc tgctttcccg aatactgcgt 120
ggcgacctgc catgatcacg ggcacgcgga cggccgctgc aactgggcat ggtcgtggaa 180
gccgtattgc cagtgcctgt tggcggactg ccaatacgcg cgaacagctg cgtcgcacatgg 240
cgtcctggct gctcgcggcg ccgatgaagg atgaacgggt gcggccgatg atcgatgtgt 300
ccgtcggcat gtcgatcact cattggaacc ccctctaata 339

<210> 2432
<211> 382
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-032-Q1-E1-G3

<400> 2432
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acgggcgggc tggagctgaa gggcccctgc aagtcctcca tcatcatccg tctcgacggc 120
aacctgctcg gcaccggcga cctcagcgcg taccaaagga actggatoga gatcgagaac 180
gtcgagaacc tgtccatcaa cggccacngc accatcgacg ggcagggacc cctgggtgtg 240
agcaggaaac agtgccagca ttcttacaat tgcaagatcc tcccgaaatag cttgggtgctg 300
gatttttgtg acgaacgtcc agattcggcg catcacgctg ctcaacagca agttcttcca 360
gctcaacatc ttcgagtga ag 382

<210> 2433
<211> 378
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-G4

<400> 2433
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cttcttcctc gctcgcgttc cattccgtcc cgccctccac cgcgcgcgc gcattcaggg 120
atggagatga agaagatcgc ctgcgccgtc ctgcgcgcg cctcggcggc caccgtggcg 180
ctcgccgcgg aggtcgcggc tccggccccc accagcgggt cctcgcgcgt cgcgcccgc 240

gtcggcgccg ccctcggggc cgccgtcgcc tccttcttcg cctactacat tcaagtgagcc 300
ggccggggcg cccggaggcc gaggaagaga cgaaggggag agagagtgac atggctgcgc 360
gcattccgat gcgtgggc 378

<210> 2434
<211> 375
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-032-Q1-E1-E12
<400> 2434

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ctgcggctgg ccatgggcgc cgtgcgcacc aaggccgccg aggccaaaggc cgcggcgggc 120
gcgctcgcca acgacccccg gacgcagccg ctggcgcgcg gcccgctgca cgactgcgtc 180
gagtcgttcg acgacatcgc ctacagcctc gaccaggccg ccaagtccct cgccgccggc 240
aaccgcgaca ccaccggcac catgctcgac accgtgcgca ccgacatgga cacctgccac 300
cagggcttcg aggagcgcgga ggagctcacg ccggtcatgg ccaagcacga ctccgaactc 360
cccaagctct ccagc 375

<210> 2435
<211> 325
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-032-Q1-E1-E2
<400> 2435

ggctcctgta cgggagtang gacaccagtg ctctgtata ttgctcgtcg tcgctcgttc 60
ttggccgcgg atcgggtgcag tgcattcgta gcggaagagg tggcgcgacc tgggtgctgtg 120
agattgaaga tgagcgggga ctccagcgcg ggatcgagta acacgatgaa gaatctccat 180
ccactggtga ttaccgttgt caccctgtct cgccgcgacc caaggccagt gcctcggcgg 240
gaccctcgcg ctatcggcgt ccggtcnccc ccatgccgcg tgaggacacg tgttacctga 300
agagcaagtt ggtacctgga atctc 325

<210> 2436
 <211> 429
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-032-Q1-E1-E5

 <400> 2436

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 aagagtacta tctcagctac tggattggga aggatagctt ggtggacgat caagtgtcgg 120
 catctcaaat aatcaatata atgtggaatt cattgaaagg acggccagtt ctgggccgta 180
 tataccaagg gaaggagcca ccacaatttg ttgctctttt ccagcccatg gttatcttga 240
 aggggtggaat cggatctgga tacaagaagc tcatagaaga aaaaagtgct aggggtgaga 300
 cttatactac tgaacgcata gctctaattc gagtatctga gacatctatc tacaacaaca 360
 agactcttca agtagaatcg gtagcaacgt ctttaagctc agcggagtct ttcgtactgc 420
 aatctggaa 429

<210> 2437
 <211> 310
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-032-Q1-E1-F1

 <400> 2437

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 gcccgccggg gctcctgggc cgacattgaa ggccgccgtg cgcgcgctct tcgaacctcc 120
 cgacgacgcc aagcgccgca acgccgacgt catccccggc agcggctacg tcgcgccttg 180
 cccgccaacc cgctctacga ggctttcttg ctctctgacg ccgccgcgcc cgccgacgtc 240
 gacgccttct gcgcgcgct cgacgcgccg cccatagtca aggagaccgt taagacctac 300
 gcggagaaga 310

<210> 2438
 <211> 409
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-032-Q1-E1-C3

<400> 2438

tgcgtcctgc gccgcccgtc cgatcaggtc actggccggg gagggctcag aaacctttca 60

tccaatacat acatctatct gagcgctttc ccgcggtgag gcccgaccgg agtccacaca 120

cacacggtgt cgatggcggc cgtaataagg agccgccgcc gcgtgtccgt tttcttctac 180

gtcgtcctcg ccgcagctgc agctgcagcc gcggcgcagg catccaataa cgtcacctcc 240

gacgatgagt actgggcgga gcgcgcagag gtggctcggg cgcgcaacct cgccgcctac 300

gtcagcgaca ccgtggccgc cacgaaccgc ttcaacgcag acgtgctgag ggccacgacg 360

cggcggggcg tggcgaagta cgatgggcgg tgcattggca ctcaacca 409

<210> 2439

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D2

<400> 2439

ttacataaat ttattaaaag ctcaagagca tctaagggtg cgatcgggag gtctgtctac 60

atagaaaatg cttttcagtt caactttcta aagtgcagcg gtgatgttaa gactagaaca 120

gataaactat atccaattaa agacatgacc caaatatctt atgttgaaca aagagtttac 180

ttaccaaga acatgataga gtaaatatga gtttgcaatc taaactgtta gtgtttacgt 240

gtatttggtg ttatgcaata ttataattg aaatgtatgt gtttattccg ataaacatga 300

cgaacgcact gatattctgt cgtgattaat gtacgaaata tggagatata agtgctcgat 360

tcacttagta cctaaatcga tcgcagaaac atcactcact c 401

<210> 2440

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-032-Q1-E1-B1

<400> 2440

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ctgctgtcgc tgctggctgc cgtgctagcg gtggccgccg atgtcgccaa cgccggccac 120
 gccaaagcccc tgacgcctgg cgggctgtgt gtacacgaca accacggcaa gttcacggcc 180
 gggccgtgga aacccgcccc cgcgaccttc tacggcgggc gggacgggtc cggcaccacg 240
 gcgggcgcgt gcgggtacaa ggacacgcgc acgcangggc acggcgtgca gacgggtggcc 300
 gtgagcacgg tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga ggtgcgggtgc 360
 gtggacagcc ctagcgggtg caagcccgac gcggcggcac tgggtggtgac ggtgaccgac 420
 ctgtgccccg ccaag 435

<210> 2441
 <211> 189
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B3

<400> 2441
 ccggtcaaga atctacggac gcatccagaa cctaataaca aaggttatag gaacaacaac 60
 tattggagca gtgataacaa taacagcaac aatgcctgga gtaacaacag caattttaac 120
 aacaataatg actggagtgg taacaattcc tataacagca gtactgagaa cggtaatagc 180
 agctacaac 189

<210> 2442
 <211> 447
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A3

<400> 2442
 cggtcaggga ttcacgggtc catccactcc tgacctacca agtacatggt catccaaggc 60
 gagcctgggt cgcgcacccg tggcaagaag ggatcaggag gcatcacctg gaagaagaca 120
 gggcaggcac tcgtggttgg catctacgac gagccgatga cgcttgggca gtgcaacatg 180
 gtggtggaaa ggctgggcga ctacctgctt gaacagggca tgtaactact acgtaccagc 240
 tggaatgcat gtcgacgacg atggttttga gtttcgactt ccaataatag taacaacaaa 300
 gcaaaggcct tcctcccggc gtatttgctt tggctcttct cctccacgcc ataagatatc 360

tagcaattgg tgactcgcct taattagttc gctttgcttt tgaggttgac tcgaccattt 420
tgctgtagcg tgaattgcat ggacatg 447

<210> 2443
<211> 259
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B9

<400> 2443

actcgcgggc cgatgcaagc ctctacagtg actcgtattg actgcgacgc gtccatcctg 60
atcgaccoga tgtcgaacca ggctccgag aaggacgccg gcccacacgt ctccgtgaag 120
ggctacgacg tggtcgagga gatgaagacg gagctgggga ggaggtgccc gcgcatagag 180
tcgtgcgcgg acatcatcgc ggtgagcggc gtcgtacgct gtgaggcaca cgggccgtcg 240
cgagtaggct ttgtccctg 259

<210> 2444
<211> 241
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C1

<400> 2444

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tcgggagatg ccttcacgc acacgttcca ctccaattgc atcgttccgt ggctcgagat 120
gcacagctcc tgccctgtct gccggttcca gctgccggcc accgactaca aaggctcatg 180
cagcagcggg gacggtggtt ttgtcagtgt cgatgcggat ggtgaaggca atgacaacgg 240
c 241

<210> 2445
<211> 322
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F11

<400> 2445

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cgaccgccat gggggactcc agcgacgggg tggcggtcga cgtcgagcgg atcttctttg 120
gcggaagg gcatcgagtg aggacgaggc acggccctct atcggtttct gtatacggag 180
acgaggacaa gcccgcgctc gtaacttata cggatttagc cttgaatcac atgtcttgct 240
tccaaggatt gttcttctgt ccagaggccg cgtcgttggt gcttcacaat ttctgtgtgt 300
accacatcac acctcaaggg ca 322

<210> 2446
<211> 335
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-031-Q1-E1-F12

<400> 2446
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cgctcttgca gcgctcgctg ccggcgggtc gggcaggccc ccgaagggtgc cgcccagtcc 120
caacatcacc accaactaca acggcaagtg gctcaccgcc agggccacct ggtacgggtca 180
gccaacgggt gccggcgctc ctgacaacgg cggcgctgctc gggatcaaga acgtgaacct 240
gccaccctac agcggcatga cggcggtgagg caacgtcccc atcttcaagg accgcaaggg 300
ctgagggtca tgctacgagg tgagatgcaa ggaaa 335

<210> 2447
<211> 317
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-031-Q1-E1-F7

<400> 2447
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gccacgcttg gccgcaagcc gagaagagtg ccgggccggg agaccggacg attattgatc 120
cgtagcagat tcgctaattg cggatacggc ggacatggag cggatcttca agcggttcga 180
caccaacggc gacggtaaga tctcgctgctc ggagctgacg gaggcgctac ggacgctggg 240
gtccacctct gccgacgagg tgcagcgcat gatggccgag atcgacaccg acggcgacgg 300

ctgcatcgac tttaacg

317

<210> 2448
<211> 360
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-G9

<400> 2448

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ctgcttatttt tgcgacccat cccgttccca cgcaaaggcg ccgagcgtga tctccgtcgg 120
tgccgggatg gcctcgcacc gggaactgct gctgctgctc ctgccgcccg cgctcgtcgc 180
tgcgctggcc tctgtcgcac ccgccgacga cgccaacgcc atgcccacca tccctgacccc 240
cgtggcgcat acccgcgtgg ggtccttoga cggcgacaag ccggcctctg acgatgacgc 300
cgtcgacgac gacgaggacg ccgcccctgt cggcgcgccc aacggggcca ccatgactga 360

<210> 2449
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H11

<400> 2449

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ccctcaccaa ataaggctccc gcccttttcc gacattcaca ggggggacag gaaatcagcg 120
gccatggcct cgattcgggc gacgaccttc gccgtcatct tatccgtcct cttctgtgcc 180
gcggttgcca ccgccgtcga caacgacctc ccgactacg tcatccaggg ccgctctat 240
tgcgacacct gccgcgccgg gttcgtgacc aatgtcaccg agtacatcgc gggcgccaag 300
gtgaggctgg agtgcaagca cttcggcacc ggcaagctcg agcgctccat cgacgggggtg 360
accgacggga acggcacgta cagatcgag ctca 394

<210> 2450
<211> 366
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H12

<400> 2450

cctataactga atcgtatgac gtaggactgc gtctcactat cgaccaccgc gccgctccgg 60
ttaaattaca cctcgaccgg ccagcgcaat tctgtggctc gatcgatcgt gggggctcgg 120
gaagcaagtg agcaagctat atatatatag aggagattct tcgagcgagc tagtagctag 180
atgggttccg ccgtcctctt ttactgcac tgcacgcgcg tcgtcgtcgc attgtcgtcg 240
tccatggctg ccgtcggggc cgccgccccg ggggaaacc ccaagttcat ctcggcgagc 300
gcccttgagt gctccgctaa cgtaacggaa atagcagagg cgccaagct gattgatgtg 360
caaggc 366

<210> 2451

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D10

<400> 2451

gcgtccactc ctaaactaat atttggagct acggagtata ccaactgcaat cgatatctgg 60
tctgttggct gtgtagtggc tgagcttctg attggtcagc ctttgtttcc tggggaaagt 120
ggtgttgatc aactggtgga aatcataaag attttgggta ctccaacaag agaggaaatc 180
agggtgatga atccaaatta ttctgaattc aagttccctc agataaaaagc ccatccatgg 240
cacaagcttt ttgtaagcg catgccacct gaagctgttg atctcgtgtc aaggctactt 300
cagtactcac caaacctgcg ctgcactgct gttgatgctt gtgcccattcc attcttttat 360
gagcctgcgg aaccca 376

<210> 2452

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D4

<400> 2452

gggtcgagca cgcgtccgcc caagcgtccg tgatcctcaa ggcgtggaag aacgcgtgcg 60

atgcgactgt ggtacagaag atcgatcatcc cgccgggcaa ctacctgacg ggcgggctgg 120
agctgaaggg cccctgcaag tccctccatca tcatccgtct cgactgcaac ctgctcggca 180
ccggcgacct cagcgcgtac cataggaact ggatcgagat cgagaacgtc gagaacctgt 240
ccatcaacgg ccacggcacc atctaccggc agggagccct ggtgtggagc aagaaccagt 300
gccagcattc ttacaattgc aagatcctcg cgaatagctt ggtgctgga 349

<210> 2453
<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D5

<400> 2453

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aatttctggc ttggttaaaa aaatccacta gactgtagga gagggataaa gggttacgtc 120
atgatagaaa acctcaggat gagcaattga acagtgagag gtgaaggcca gatagtgatg 180
gggggaaagg gttcggggat tttatcagcc gggaccatgt ttcgggtctat tcttaatata 240
atacagggag ggaggtatatt agataaaagg atgagtttct gtttgataaa a 291

<210> 2454
<211> 315
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E10

<400> 2454

aacatgcagt catctcctcc atcaccacca ccaagctcaa caacagccag ctgcgaaaa 60
taatgaagag ccgcagcatg gcatcatcgg ccgcgtcttt ggtgcgagcc ggcgcgctag 120
tggcggccac agccccacag gtagcggagg caaagaagaa gagagcggcg gagagcggcg 180
aggcggcgga ggcgaagaag atccaggacg acttctgctc gacgctgtgc gagggcaaga 240
aggggacgga cctggtcgtg tgcaaggagt cctgcgcgct ctcccagcag tccaacctgg 300
tgctgtaagg cagga 315

<210> 2455

<211> 65
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-B10

 <400> 2455

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 tgctc 65

<210> 2456
 <211> 311
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-B3

 <400> 2456

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 gcaactcggc ggcgctgttc cagaactgcc tcatgacggt gcgcaagcgc ggggacagcc 120
 agtccaacat ggtgacggcg caagggcgga cggaccccaa catgcccacg ggcacgtgctc 180
 tccagggctg ccgcatcgctg ccggagcagg cgctcttccc cgaccgcctc cagatcgcca 240
 cctacctcgg ccggccgtgg aaggagtacg cgaggacggt ggtgatggag agcaccatcg 300
 gcgacctcat c 311

<210> 2457
 <211> 327
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-B9

 <400> 2457

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 catctgcggg tcccacatca tcgttcgaca cacgagcacc gagcattcaa tccgtcatcg 120
 ggggcgatga cggcgacagt gattatacat gcagcggctc tcgcagtcct ccagctggcg 180
 tcatcgctcg ctaaaacggc acgcatggcc agcgtcgccc aggacgaact ctcagcattc 240
 gtagcagtgg ccgttacttc ttcacatcac ctgcataaag attgatccga agctgcagat 300

gaacggaatg ggactgataa ggagtgc

327

<210> 2458

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C10

<400> 2458

gggtcgacgc ccgcgtccag ccgcattcct ggtgtcgggtg gtgttcctgg gcctgtccac 60

ggtggtgacc atgatcttcg cccgcgaggt gccgctggac ccggcggcgg cggcgaagca 120

ggacgaggcc ggggagtcgt cgggcccggt cgccgttttc aaggcatga agaacatgcc 180

ccccggcatg ccgcaggtgc tcatcgtcac gggcctcacc tggctctcct ggttccccctt 240

catcctcttc gacaccgact ggatgggccg cgagatgtac cacggcaggc ccgacggcag 300

ccccgaggag gtggccaggt tccaggaggg cgtccggcag ggcgccttcg gcctgtctct 360

caactccgtc gtctcggag ccagctcctt cct 393

<210> 2459

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A12

<400> 2459

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atgacccgtg ccagcagcag tagcagcagc cggcgtgtga cgctgggtact gctcgggtctc 120

cgctcgccgc gtctggttgg tgttgccgag gcggtagtgg agttggtgcc tgctgatgat 180

aatatcgccg ccgccgctgc tggcacggcg gtggacgatg gcgagccgcc tcagcagtgc 240

gcgaccccg tgagcgtgga ggaggcgtgc cgcggcgcgt ccgagacgca cgcggcgtg 300

gcctacgacc actgcatggc gtcgctgggc gccgaccgc gcagcaagga ggccgggaac 360

aagaaca 367

<210> 2460

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H10

<400> 2460

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tggccttgcg gagcgtggcc ctagtggggc tgctcctctg ccacctcgcc accaccgct 120

cgcgccacca gaaagacatc cacgtcctcg gcagcgtcga cggctccagc gacggcagca 180

gccccgagtc cgaaggccgc gtcgtctacg cggacatgaa gctggctgat acggaatccg 240

atgcgccggc gccggcgccg gcgcgggggc cgtcgtccgg ttgaactgag aagcgtgcgt 300

ccagccaagc aaggtggtca aaaccgagaa ctaattaagg gctcgattgt gtgtccggct 360

actactgttc ttgccataat tatatataga tacgcaaagt gtggccaagc ctaccacatg 420

ca 422

<210> 2461

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H12

<400> 2461

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ggaggtcgcg gtgctcgcca cgggtgcgcg gcccgcgcg ctgtgccgca aggccgcacg 120

cgtgcgcaag ggccgcaggc gctctgcctc cgcggggccag gccacggaga tatacgagct 180

cctcgtggac gacaccggcg tcgtcgaggt ggatgccggc gccgccaatg cagtggcgct 240

gcccgtaag cccgccttgc agctggagga aaagggggag ctggacaagg acgtgtgggc 300

gacgttctac ggcaccggct tttggacgag cccgtcgcag ctggacgaca acgacgacg 360

gtgatcggga caggcccgcg agcgagctat caaaagct 399

<210> 2462

<211> 332

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H2

<400> 2462

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attatgatct cgctgactga aacttctaca ggccagttga tagcaggttg gattccttca 120

egggacctcg taatcattcg tgctagttag taactcatgt aatatgctct caaaccaagt 180

gtatcctgca ggaattttcg agacacacat atctgcgaat gtgatctcaa tccagtggca 240

tataaatttc tatcatggaa cgagtactcg ttgcatcatt atgagcacat attgaatccg 300

gattatccct gcctctgacg agaatggatt tt 332

<210> 2463

<211> 334

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-H8

<400> 2463

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gaagcaagcg tctccgatcc gatgcatcgt gcgagcatat ccaactgcgat ggacgcgaga 120

gcggccatga gctggtagtg cggtccctt ctggccgtgg ccatcgcgct gttcctgtcc 180

gtgtcnctcg gcgtgcacgc cgccggagcc ggcaccggcg ttgacatcaa tgtgtcgtgt 240

gcagcgacgc cggacccgga cgtgtgcctg cgcgcgctcc aagctgacag cgactccaag 300

accccgcggg acctgacgga cgcggcactc cgcg 334

<210> 2464

<211> 290

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-G3

<400> 2464

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gggtccagga gaatccagca aagcataaaa caaaactggg aaccttaagg caggatagct 120

tgaccacacc gaagctgggtc caagcaacaa attccttgag cctgcaaagt catgaacttg 180

gtgagaacca ctgggagtca aattggtttag acaagtggat ggctgtacgt ccatgggaga 240
 acatgttact tgactgtaat gccanagaga gtctgccaac gcatgaagat 290

<210> 2465
 <211> 259
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-030-Q1-E1-D7
 <400> 2465

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 tccgaagcaa gctttcataa gatgcgcgcg aggaaccatc caagtgatcg gtttgatata 120
 tgaaagacca gatgatgcaa aactatgtgt aaaggatctc atattgctgt catcaactat 180
 tcaaattgact gatagtcgac gtaaacttac taaaatatct ggctgcacac aggagtgcgc 240
 aatccaaggt ctcaacaca 259

<210> 2466
 <211> 406
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-030-Q1-E1-D8
 <400> 2466

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 ttttcatctt cggctgctat ctttgacaag atgaacaagg acaagcactc agaaaattca 120
 caaggagaaa gcacggacaa tattttgcat agcgttggtg aagggaccgg acaaccaaag 180
 aatcaaaaacc ttcatgtgtc tcacagccga cgtagtatca tgagaatttc taatttttcc 240
 atgaaaagag gcccttcaat ggccatgata gtccttcag tagctatcag agtccttca 300
 atatctctga gaggtccttc aatgtcttca agagcatctt ctgtgtctgt aaaggaagac 360
 caaatttccc caaataaatc agacaggaa acggaatcag tgttgg 406

<210> 2467
 <211> 368
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E1

<400> 2467

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cgcaatgatg ggatttgcta atgatgcttt cgtaggatgc gcgcgcggaa acaagcaggt 120
gaagggtttc atgtttgaaa aaccgggttga tctgaaagta ggtgtgaacc atgtcgtatt 180
gctgtcgtca actatgggaa tgaaggatag tgggtggtgaa cttgctgaag taaagggcgg 240
cattcaggag tgcctaatcc aaggtctcaa cactgggacg ttggatttac aagtcaatgg 300
ctggggccat aaagctgcac tagaagggtga gtacaaggag atctactcac aaaaggttt 360
gggcaaag 368

<210> 2468

<211> 139

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F1

<400> 2468

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cggagatgtg cccaacgaat cccgatagct ctggccaagc cgccgcccggg tcctgttaga 120
acacctagtg gcagtaggg 139

<210> 2469

<211> 292

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D2

<400> 2469

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ctcgccgccg ctgcgcgacg ctgccgttgt cgccgccagc ctgcaggagt tcgtcgccgc 120
caattcgac gcatcatcag acggcgctccg gcggcagcgc aacgtctgcg tcacgtcggg 180
cgggaccacg gtgccgctgg agcagcgatg cgtgcgctac atcgacaacg tcagctccgg 240
ccaccgccc gccgcgtcca ccgagtattt cttaaaggct ggctatgcgg tc 292

<210> 2470
 <211> 341
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-C11

<400> 2470

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actggaagtt cggcgtcacg taccaggcat ccaagaactt ctaagtagcc actttccctc 180
ctcttcttca tcctgcatat gccacaagc aaccatgcaa atgataacat gcacatgca 240
tgcatattca ttctttcgct catgcactcc aatatgggtgc cggagttaaa aaaatgtaaa 300
tcaatgtgca aactcaaagc acatcttaac cagttgtgat c 341
  
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<210> 2471
 <211> 368
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A7

<400> 2471

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caacgatccg gccccggccc cgcgcgggtc cagcaagccg ggacatggcg cgcggcggca 120
tcgcccgcct actcgccacg ctctctctct tcctctgct cgcacgccc ctgcgagacg 180
gagcttccga ggcagaggcg gcgggcctcg cgcagggcgc gtccgaggcg gcggcgccgg 240
acgcggggcg ggacgcgcag cagcagcagc tcctgccgcy gccctcgtc atcgagctcc 300
cgtcgteget ggccgaggac gaggacgagc ccggcgccga cgccgtgccg ccggacgtgc 360
gctgcgcc 368
  
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<210> 2472
 <211> 391
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-B1

<400> 2472

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tgccctcctcc tctccttaaa ggaaggggtg caaaacttca gcgaccgacg aagaagacgt 120
tccgggtgcag cagcgggttca tctgggtcaag gaagagaaaag atgccgcgcc tttttcacga 180
ctccatcatc tctcttctgg attactctca gtgctgcagc gtaaactcgc gcgcagttcc 240
ctgtaaaagc tggagctttt ctgagcgtgt angtgcgttg gtggaacttg ggccccaggt 300
ccccaccca agatctcacc tatctgcact gggctggccg gctgggcccg ccgccaacca 360
acgtgcttcc gccattgcgt cgccgcataa c 391

<210> 2473

<211> 297

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H6

<400> 2473

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tctagtgcga ttcagtcata tgacgtgtag gaagctgcgg aaggtcctag cctgcacaga 120
tatagaccac gagcaagcaa ccaagtgtgt caccgaggct cttctgttca aagctgatgc 180
accacaccgg caacgagctc ttgcagcgga cgcaataacc tgccggaaat tcgccgagcg 240
ggcttacaag tacagaccac tcaaagttgt tgagtttgat cggccctacc cacagtg 297

<210> 2474

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A3

<400> 2474

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cgctcctatt ctagcatttg tgacaacca cattctgtac ctcaacttct acgaacttga 120
caaaggcctg aacatgaagg tttgtactgt gataatcatt gctcagtgtc tcctatgggc 180

actgtgggct gtcattgactc ggcattcctc acggctgaag atcatatttg ttgccatcgg 240
 aggtgcggct gcagtacttc tggaagcttc tgacattcct ccgcgatggg gatatgtgga 300
 tggccgtgct atatgccttg ctgtggctat ccccttttcg taccttttgt ggagctttgc 360

<210> 2475
 <211> 262
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F3

<400> 2475

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 tTTTTTTTTT tTTTTTTTTT tTTTTTTTTT tTTTTTTTTT tTTTTTTTTT aaaaaaacc 120
 caaggcatta aaaaaaaaaag cggggtaaaa aggttgatcg atgggaaatg agaataga 180
 acaaggcaag aagatacaaa caaagaccca ccaggaggtc agaccggca ttgacgactc 240
 aactacaagc ctaggagaaa aa 262

<210> 2476
 <211> 287
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-F7

<400> 2476

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 ggctcccgtc tccatgggtc tcctctcaaa caggattggg agggagagcc tcaaggcggg 120
 ggatcatatc tactcctgga gggcggcgtg ggtctacgcg catcacggaa tatatgtggg 180
 cgatgataag gtgatccatt tcacaagagg aagaggacag gaggtcggaa caggaactgt 240
 cgtcgatatt attcttgtga gttccacccc aaaacgaagc aacacgc 287

<210> 2477
 <211> 284
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G2

<400> 2477

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gggcactaca tggacgtcgt cacgggaggc gacatgtggc agttgctgaa ctattgcacg 120

ggggagatga atgaggcgct ggtcaatctt caccacagcc aaggcatgct gcagaagtgc 180

aacctctaca agttgagcct gttcttgacac aggtggcagg aggagtctta gcccggcgac 240

atcggctgga atctttcgac atggtcgccg gtcaggacga tgct 284

<210> 2478

<211> 256

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G6

<400> 2478

cccctccctt ccttaaccgc ggcggttat tccccatggc ttcaccgaac aacgacaacc 60

gcaaggcggc gggcatcctg cggtctgctga tggggatggc ggcgggcgcg gcgcccgcct 120

cggcattgcc tcggggcggc ggcctgatga tgggtcagca cgtcatcctc gacgtcaacg 180

gggaactgtt ctcgggcggg gtcggcgggc gcggcggtgc gccggcgctc aaggccgcga 240

tcgcccgcgt gaagga 256

<210> 2479

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-G8

<400> 2479

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tgccgtcgcg gtcctggccg cgcgcccggc gtctgcaggc gggggagccg cggcggtggc 120

ggagatctgc atgaagactc cgtccccga cctgtgcacc aggacggcgg ggaagcacgc 180

caacaagtac aagggtggtg acgcggtgac ggtgctagag atgcaggtgg acgcgttcaa 240

gaagcgctg aaggcgccgc ggaggctcgc caacgatgag gtcaagacgg 290

<210> 2480

<211> 246
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-E8

 <400> 2480

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 atgcgctcgt ctgctgctcc gagatcgatg gagcttctga atcctaggta gctcacgctc 120
 gttcacctat cggccccgtg catgtacata gttggggaca cacgtcgcta ggacgatgag 180
 agagagagag agagcatggt aggggtgaaga ctggaagatg cttgtaaact gtaatttgat 240
 cttggc 246

<210> 2481
 <211> 400
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-C11

 <400> 2481

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 cgatagacct cagccctcat gcaagccgac cgcttacgta ccaccgcgcc aaccgaaag 120
 taagatggag atgatcatga cgatcctcat cgccgcgctc ctggttgctg ccgtctcggg 180
 caccgcagtg ctggcctcta acgacgcagc tgcagccggt gccgaatccg catccgcgctc 240
 gtccaattat gtggaatcct cccgctggag cccccggtta cgtctacagc actggcaccg 300
 cctcgaggct gacagctaga ggtccagccc ttgccatagc cacggcattc atcgttacac 360
 gatgcatcat catctgtaaa tctgtgaaac tcatcggttt 400

<210> 2482
 <211> 293
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-C6

 <400> 2482

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ttctacggac gcaacatcgg ctacccggat aagctgaggg acatcggctt catcgtctag 120
 togatctgca agccgctcga cgcttggctt aaggacatgc gcgcggtcgc ttatttcatc 180
 cgagtttgtt tttttgcagg attcttaaaa gttggaccgt gctgctagta ttccatgttt 240
 cgtgttttca taatggacga cgtctgtaga tgtataaaaa tcctctggcg ctt 293

<210> 2483
 <211> 329
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-029-Q1-E1-D10
 <400> 2483

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 cggattcaga ggcaacactg tcatcaccac agggcactca tcaatcaatg aaatctaaga 180
 caaacccatg aatcccagcc agtacaactt gatcgcttca aaagctgtcg cgacaaccat 240
 gctcatacag gggatgtaat gacaaccct tcacctgaaa tgcattgtga tgctgtcgct 300
 ggttccaact tcattttcag taataacaa 329

<210> 2484
 <211> 365
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-028-Q1-E1-H4
 <400> 2484

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 atcggcaatg tcgaacatcg ggcagtcctt ccaggccggc aaggctgagg ccagggcgca 120
 gtaccaggcg gagcacgcgg cgagtgcggt caaggacacc gccgcagccg cggccgacag 180
 tgcgagctg cagcagcacc gccccaccgg caccgttgag caggtggcgc agacgggcca 240
 gggcgtggcg gcaggcgtca aggacacggt ggcgggcgcg gcggttggcg tcacgaacac 300
 ggtggcgggc gtggggcgcg gcgtcacgaa cacggtcacg ggcgcctgg cnggcgtcac 360
 gaaca 365

<210> 2485
 <211> 349
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-028-Q1-E1-H8

 <400> 2485

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 cacggcaaaa caccttcgcc ggcgagagca tggcgatggc gtaccgtgtc ctggaggtca 120
 ccctggtgtc ggcaaatgac ctcaagaaag tgtcgctctt ctcccgact cgcactctacg 180
 ccgtggcttc catctccgga ttgcacctcc gcatcccttc ccacagcacc caagcagacc 240
 acagcaacgg ctgcaacccc tgctggaacg ccgtggtaca cttccccatc ccggctgccg 300
 ctgacacccg cggcctcgca ctccacgtga ggctccgcgc ccagcgtct 349

<210> 2486
 <211> 399
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-A10

 <400> 2486

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 cgcgtccgcc cacgcgtccg cacaccttga gacctgcgtt gtcacccacc catcgagggt 120
 ggggccgcca gcaggttcag ccgttcctgt tcttgataaa acgagagaag gatggcagtg 180
 tttcagggag ctgtcctatt cttgtttctc ctctcgtcg cagcagaggt gggaaccatc 240
 gatgccaaaa tgggagtagc catgcccatg catgccttga taatggagaa agcgaaacag 300
 caggagacgg agaagaagga ggagaaaagc acggagaagg aagagagtca atgcttatcg 360
 ccgagtctcc agttcgaggg cttctgcttc aacagcgac 399

<210> 2487
 <211> 362
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-A11

<400> 2487

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gccgcaaggc ggtgcatgcc agcctctccg cgcctcaagag cgcgggctgc gagggcgctca 120
tggtggacgt gtggtggggc atcgccgagc gcgacggccc gggccggtac aacttcgagg 180
gctacgcgga gctcatggag atggcgcgca aggcggggct caaggtccat gccgtcatgt 240
ccttcacca gtgcggcggc aacgtcggcg actccgtcag catcccgctg ccgcggtggg 300
ccgcgaggga gatggagaag gaccaggacc tctgctacac cgaccagtgg ggccgacgca 360
ac 362

<210> 2488

<211> 291

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A3

<400> 2488

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cgtggccgct ctgctggtgt tcgcgcgggt gtcgcctgcc gcgcgactg tggccgcaga 120
ggcagacgcc aatgcgaacg ctgtgggaag cgcgccatcg gtgcccgtg gctcgtgga 180
catgcccag ctaggcgcca agggcgacgg caactcggac agcaccgccga tgggtgctcaa 240
cgcgtggaag cacgcgtgcy acgcgacaga gcaccataag atcgtcatcc c 291

<210> 2489

<211> 213

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A5

<400> 2489

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atattacttc atgcaaggaa aacatgtggt gatagacata tcagatcaac gattcacagt 120
catttcatag tatgataaca aatatcccaa aatacatgtg aacttggcag tcttatgtat 180
catgccctaa agaaaatcta atggcagcac act 213

<210> 2490
 <211> 116
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A7

<400> 2490

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 cagtagcacg cacagtagaa gccaacgcca acacgacagg caaaggtata ggacgc 116

<210> 2491
 <211> 375
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-A9

<400> 2491

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 taattcgttg atgttgtcgt tatagttcct ctacactaca ctctgtgacc ccgcctgcat 180
 ctagttttgc ccgtccatgg gcggagaatc tgaccatggg tttgtcccaa gcttgcatca 240
 cagtggcgca tccagtgacc cacgtgatct ctgctttgcc gcagaaaatt tttgcggagc 300
 aactgccggg tgctttgtat ttcagctttg taaatttact tttatccagt cgttctgagt 360
 ccaagccgtc agtgc 375

<210> 2492
 <211> 292
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-B1

<400> 2492

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 acatggcagc cgccctccgt gtcgtcatcg ccgtcctcgc cgctcgtctcg gtctctctcc 120
 ggcgcgccac ggcggccacg gtccccaccg tcgacgaggc gtgcaagcag tacaccaagt 180

acccggagct gtgcgtcaag tccctgtcgt ccgcggcgcc ggaggcgaag gcgaaggcgg 240
agcggggcgg gctggcgggg ctggccgggc tggcgctggc gcaggcggcg ca 292

<210> 2493
<211> 209
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-G7

<400> 2493

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ccctcgacat cctcacgtcg tgttcgggca gcgtgagacg catcacgggc tccgcagcgg 120
cggctagcac atccattacc aggcgtaggc gcctgggggtg acgtacgact cccaacggta 180
cgaggccgta ccaggctatg gtcatgttg 209

<210> 2494
<211> 351
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-H12

<400> 2494

aagaacccat ccgcggtcgc cagagcacaa gaatctaacc tcgcgcttct cacgtacggg 60
cagctcaaca acgtgtggga ggcagtctac atccaatacc tgatgggcgt gcacggcgtc 120
atcgttgacc gggtaggagga gatctcggac gccgtggccg gttttggtct ggggaaacca 180
ggccttgccc ggggcggtgc tggcgtggac ggagcgaana cgcacagggc tcaggccttc 240
tcgcagcagc agctgggggt cctgctccgg cttatccctg aactgattga gcagcggcac 300
tgaaggacgg tacaccacca tatgtaacat ccaggttttt tgacccccc c g 351

<210> 2495
<211> 351
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-028-Q1-E1-H2

<400> 2495

cgacccacgc gtccaccac gcgtccggt agagttgatg tacttggatg ggtagtttgg 60

ggaagagtat gggtaaggga cgttctgagg tcgtcgaaat cctcgcgtcg ggttcgatca 120

gggtgaccgc cctctcgggc tcggtggtgg cggctatcac aaccagcagc agccgtacgc 180

acctgcggag acatactatg cccattggta ccaggccgta ccaggctatg gtcctgttgc 240

tgaaggaaga cctgtgagaa tgaggcgtct cccatgttgt ggcctcagct taggctggtg 300

tctgttcata aacgggtttt tcatggctga cattccatgg ttcattggag c 351

<210> 2496

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-E4

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ataacatctc ctggaacgcc aggttccttg gaccactata tccaggagcg acgaagtgat 120

ccacccgccca gccatggaga tgaagaaggt cctctgcgcc gccctcgtcg ccgcgcctc 180

ggccaccgcc gtgctggcct cggtcgcctc cgaggcgccc tccgaggcgc ccgcgcgcgc 240

ggccggtggt gcggtggcc ctacgcgaag cggcgccgcc gccgccgcgc tgccgcgcgc 300

cggggcgcctc gtcgcctcct tcctgccta cgagctccac tgagcgacga cgcgcggggc 360

ggcaacgttg ggatgcatcg tg 382

<210> 2497

<211> 76

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-F1

<400> 2497

tttttttttt ttttttgagt ttgcacattg attttccaac gttttgatac ttataaaatg 60

ctttttttgt tgtttc 76

<210> 2498

<211> 374
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-028-Q1-E1-F11

 <400> 2498

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 agtaacggca gcacgaaaca gtacagcgga gaacagcggg actgacaaca gcggcgggtga 120
 tggtaaggca ggtattcgac acaatagcgc accagccgaa gccgaagaca acggcactgg 180
 gttgccgcca tctactgcaat ggatcaagag cttgtttctca cgcacgggca caatcctccg 240
 gtcattccag cggcagatcg catcattggg agaattgagc aatacctcaa tataacgata 300
 ggcgactgtt actgcttgag cccattgggt ccaatgtaca tacgaacatc acgagcagtt 360
 ctgcatgcaa attt 374

<210> 2499
 <211> 388
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-028-Q1-E1-A9

 <400> 2499

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 tccttcgaca tcaccaagtt gggcgcctcc ggcaatggca agacagacag cacgaaggct 120
 gtgcaggagg catgggcatc ggcgtgcggc ggcactggga agcagacaat cctcataccc 180
 aagggcgact tccttgtcgg acaactcaac ttcacaggcc cttgcaaggg cgacgtgacc 240
 atccaggtgg atggcaatct gctggcgacc acggacctaa gccagtacaa ggaccatggt 300
 aattggatcg agattctacg cgtggataac ctgggtcatca ccggcaaggg aaaccttgac 360
 gggcanggcc cagccgtgtg gagcaaga 388

<210> 2500
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-H6

<400> 2500

atacaagact ctaccatgag tcattctcaag cccaacggcg acgcgcctat ctcgagcacg 60

gacaagcaga tctccccga cgccaagtcc ggaacggcgt actcgaagcc gcgccggctg 120

cggaccgacg aggtccccgg gatcgtcgac gacttcaggc gggccgcacg gaacgcgatc 180

caggctggtt tcgacgccgt cgagatccac ggcgcgcacg ggtacctcct ggagcagttc 240

atgaaggaca gctgcaacga ccgcacggac cagtacggcg gcagcctgga gaaccgggtg 300

cgtctcgccg tggaggctgt ggacgccgtc gtccgcgagg tgggcgcgcg ccgcgtcggc 360

atcaggctgt cgcccttcgt cgacttcgtg gactgcgtgg actccgaccc ggtggcgctc 420

ggccactaca 430

<210> 2501

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-028-Q1-E1-A11

<400> 2501

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aagttgtgta ctgccaaagg cgctccaag gtcaccgtca aggatgtcac cttcaagaac 120

atcaccggca cctcctccac cccggggggc gttagcctgc tctgcactgc caatgtgcca 180

tgcaccgggg tcaccatgga tgacatcaac gtctagtata gcggcaccaa caacaagacc 240

atggctatat gcacgaacgc caaaggcagc accaaagggt gcctcaaaga gcttgcacgc 300

ttctagaccc tccatcgact gagacatctc tctacttata aattttctcc cgtccttgca 360

gtgcccacta gatgctatcc 380

<210> 2502

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-F9

<400> 2502

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tgcctatgcc tgcgcaaacc gtacagccgc gtctgatgtt gctctggaca tgagagcacc 120
cccttttcag catctatcgg cagggcagag aagtgactct tgtgataggc tgacagcaga 180
gacaaacttg tacacgagat caaccaacgg catcgctgcc actgcagcag gagtggcagc 240
aactactcac agaaaggctcg gcgttggtcc gtttggcatg tcaaacatgt attagtgact 300
ggatcatggc cgaatcatgg tgaatcctct gtgcggttga tgggtctatg ctgccttcag 360
gtggctaaac accgacaac 379

<210> 2503
<211> 366
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-027-Q1-E1-G1
<400> 2503

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gaccagcgac caccgcaagg ccacctcatg gcacgttctc cccgctgact ggaagttcgg 120
tgtcacgtac caggcatcca agaacttcta agtagccact tttcctctc ttttcaacc 180
tgcatatgcc cacaagcaac catgcagatg ataacatgca tcatgcatgc atattcattc 240
tttcgctcat gcattccgat atggtgccgg agttaaaaa atgtaaatca atgtgcaaac 300
tcaaattgaca tcttaaccag ttgtgatcaa tctcaaccgc taatgcattg cacacaccga 360
atgaag 366

<210> 2504
<211> 330
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-027-Q1-E1-G10
<400> 2504

ctagtctgac tcatattatc cactgcttcc agaggcttcc tctcgagtcc gcagtctctc 60
ttccctacga agttcagaag ttgtcacaat gactcatatc cttggccaca cattgttttt 120
ttttctgttc ctgttggtct atcgattctt gtaagggcgg gttttgcagt tcgttgctct 180
tttatgtcat ggtggactcg ttgtttttta tgttttctgt tggaacggcg tgtttcggat 240

gatggttccg ttctgtcctt gacctgggct gggctgcacg cggcgaccag agggaacgcg 300
accggcagag ggcgcaagcg cggcggcccc 330

<210> 2505
<211> 372
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-G12

<400> 2505

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tatgtatcag atctgtagag ccttggcata cattcacaac agcattggag tgtgccacag 120
ggacattaag cctcaaaatc tcctgggttaa tcctcatacc catcagctaa aactgtgtga 180
ctttggcagc gcgaaagttc tggtaaaagg cgaaccaaac atttcttaca tctgttctag 240
atactacaga gctccagagc tcatatttgg tgctactgaa tacacaacag ccattgatgt 300
ttgggtctgct ggctgtgtgc tcgctgagct gcttctagga cagcctctgt tccttgaga 360
aagcgggtgtt ga 372

<210> 2506
<211> 373
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-G4

<400> 2506

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acgacgacga cgtgccgcca catccacatg gcggacgacg ccgtcgccgg cggagcggcc 120
gttcgctgcg cagggccggc gccggcctcg ctgtcttcta gcaggaagca gcatcagcag 180
cccagcagc cgggtgagg cagcagcgac gaccactacc agcagcagct gatcatgctg 240
aggcggacga tgagcggggc ggcgttcccg ccgccgatct ccgtgatgtg caagggcggg 300
cgggcgtggc tctgcctgct ggcgcaccgc gaggggtggac gcctcgtgct gcggcagatg 360
cgctgcctgt cgc 373

<210> 2507
 <211> 345
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-027-Q1-E1-H10

<400> 2507

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 ctcaaggacn agtacaacat gccggagAAC agcctccgct gcggcaaggt cntcggcctg 120
 ccgatgccac cgtcctaccg cgccgtctag agcgtcgatc gatcgcgcac ngtgctgtac 180
 acaacttaaa gagagcgaga ggggaacttt tccccgttt ctttctctag ccagccttgt 240
 ctgtcccccc ctcgtttaat ctctctctct ttttttctgt tcgcttccca ggaataatac 300
 ccaaacaaaa aaaacaaagg gggtcacaaa tttatcatgc atgca 345

<210> 2508
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-E11

 <400> 2508

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 cgtttgcgtc tcaagagttc acttgtaaata ttgtaatcga ggaagaaaag cacctctcga 120
 tcgattaaca tgtctagctg ctacgacccg gtgattcgac gatgttaatt aatcggcagc 180
 tttcattatg atgtgtagca gtataactgta tgattaattg tggatctttt cgaaaacaaa 240
 aactgtaata ttctgtgaaat tgtagagcct tcacctatta ttaatctatc aagtaatcga 300
 gaaaatgtaa ttaatcccaa acgtgaatac atggtgcaaa aacatgaatg atggtaggaa 360
 aatgaaaaca acatttgaaa aaaaaagaaa aaaaaggggg gg 402

<210> 2509
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-E2

<400> 2509

cgggccgata cagagttctg cccaggcgtc ctgggagcac ttggttttca ttacgagtt 60

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agccccctgac gcctggcggg cgtgtggtac acgacaacca cggcaagtcc acggccgggc 180

cgtggaaacc cggccacgcg accttctacg gcggggcgga cgggtccggc accacggcgg 240

gcgcgtgcgg gtacaaggac acgcgcacgc aggggtacgg cgtgcagacg gtggccgtga 300

gcacggtgct gttcgggtgac ggcacggcct gcggcggggt ctacgaggtg cgggtgcgtgg 360

acagccctag cgggtgcaag cccgacgccg cggcactggt ggtgacgggt accgacct 418

<210> 2510

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-027-Q1-E1-E3

<400> 2510

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tgcagcgcggt cagcctcgac ctcatcaccg aggcgtccgg caccatgtcc gcaggcatcg 120

ccctgccacc ctccaacgcc ggagcgccct cctacggcgc ggcgggcgct tccgggggct 180

ccgccgatgc ccccgccggc gcctccgagg gcctgcgag cggcagcggc ccgtctggtg 240

acgacgcgcc ggcgtccggt gctgggtgcca gcgcgtcggc tgctgatgct ccggcgggccg 300

cngcctcatc cgggtccctct agcgcaccag cgccatcgtc gtcgtctgag tccctccgccg 360

caccaggccc atcttctgat ggcacctcca acggcccaac aacatcgctc ggcgacgatt 420

ccg 423

<210> 2511

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-E4

<400> 2511

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ggtcacctcc atcgtagtg aatcaccac ctcttcacc actgttaagt tcgcccgcgc 120
 caccagcgcc ggtgaggta cctccaccgc taacgaaatc atcacctcct ccaccaccga 180
 taaggctgcc acccccacca caagcaaact cacctcctcc atcagctcta ataagctcac 240
 ctctctctcc gatgcaatcc cctccaccgc ctgctccagt cagctcacca ccaccaccta 300
 taaaatcacc accaccggct ccagtaagct caccacctcc tctggcgcaa tcccctccac 360
 cacctgctcc agtcagctca ctaccaccac ctgtaaaatc atctcctcca acgggtccaa 420
 ttaactcaac aacggct 437

<210> 2512
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-027-Q1-E1-E5

 <400> 2512

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 agagcggcgg agagcggcga ggccggcgag gcgaagaaga tccaggacga cttctgctcg 120
 acgtgtgctg agggcaagaa ggggacggac ctggctgtgt gcaaggagtc ctgcgcgctc 180
 tcccagcagt ccaacctggg gctgtacggc aggatccagt gcaagggcaa gtgcaccgag 240
 cagaagggca tcacggcgcc ggccatgaag gtctgccagg aggagtgcga caaggcgtac 300
 gtggtaagg cgcccgagg caccaggcc tgcagcgtca cctgcgcgcaa ggagaagaac 360
 cggcctcag ccagaactgc aagaggtcct ngcaccctcc tc 402

<210> 2513
 <211> 385
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-E7

 <400> 2513

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 ccttttccga cattcacagg ggggacagga aatcagcggc catggcctcg attccggcga 120

cgaccttcgc cgtcatctta tccgtcctct tctgtgcgc ggctggcacc gccgtcgaca 180
acgacctccc cgactacgtc atccagggcc gcgtctattg cgacacctgc cgcgccgggt 240
tcgtgaccaa tgtcaccgag tacatcgcg gcgccaaggt gaggctggag tgcaagcact 300
tcggcaccgg caagctcgag cgctccatcg acgggggtgac cgacgggaac ggcacgtaca 360
cgatcgagct caaggacagc cacga 385

<210> 2514
<211> 384
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-E9

<400> 2514

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tacacggaca atttggagat ctgatgaggt tatttgatga atatgggtgct ccttcgactg 120
caggtgacat tgcttacatt gattatctat tcttggggga ttatgtagat cgcggccagc 180
atagtttaga aactatcact cttcttcttg cattgaaggt tgaatatacct caaaatgtac 240
atttgattcg aggaaatcac gaagctgcag atatcaatgc tttgtttgggt ttccgaatag 300
agtgtataga acgaatgggc gaaagagatg gtatctggac atggcatcga atgaataggc 360
tatttaattg gcttcctttg gctg 384

<210> 2515
<211> 363
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-F10

<400> 2515

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cggacgtcga tcgtgttctt cagcacgggc tagctagctc cctccctccc agccatggcg 120
acgccggaca acaaggggca cgggcatccg ctgccaagt ttggggagtg ggacgtgaag 180
aatccggcca cgtccgaggg cttcacgctc atattccaga aggcccgga cgacaagaag 240
accaccaccg gccctggggc tgggaacgcg cgcgcaggca ttccgcgggc cttcaggaac 300

ggcggcgggcg acggcgggta caggcccgac ttcggcgacg gcaaccagta cacgccgccc 360

aaa 363

<210> 2516

<211> 362

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-F11

<400> 2516

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ctcctccgtc tccaccggcg caagccacac ctccaccacg tcgccgtcgt cctccggcgt 120

cgtcgtcaag gacgtcgtga aggatgcggc ggcggccggc gaggtgatga cgcccgccga 180

cgccgagaag cctatctctg tcgaccccaa ggcagacgcc atcgtggtga tggacgccaa 240

gaaagaggag ggcaacaaca aggtggccgt ggaggaggat ctgcttcctg aatccaccat 300

ggccgacgag gcgcttgctg tggatgaggg gcccaaggtt gacgaaccac tcaaaatcaa 360

ag 362

<210> 2517

<211> 360

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-F12

<400> 2517

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gcggaggcga aggcgaaggc tgtgggaggg gcgccgtcgg tgcccgtgg ctcgctggac 180

atcgcgacgc tggggcgccaa gggcgacggc aagtcggaca gcaccccgat ggtgctcaag 240

gcgtggaagc acgcgtgcga ggcgacgggg cagcagaaga tcgtcatccc caaggccaac 300

tacctgacgg gcgcgctgga cctggtgggc ccctgcaagt cctccatcat catccgcctc 360

<210> 2518

<211> 324

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-C5

<400> 2518

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gccgcgctct tgggtgctagc cctcgcgcta gtggcgccca ccgccccaca ggtagcggag 120
gcaaagaaga agagagcggc ggagagcggc gaggcggcgg aggcgaagaa gatccaggac 180
gacttctgct cgacgctgtg cgagggcaag aaggggacgg acctggtcgt gtgcaaggag 240
tcctgcgcgc tctcccagca gtccaacctg gtgctgtacg gcaggatcca gtgcaagggc 300
aagtgcaccg agcagaaggg catc 324

<210> 2519

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-C7

<400> 2519

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tgtcacgtgc gttgacctgg ccggaggcgg cgtcgatcct accgacccca acaccatccg 180
gtccttcaag cagtacgaca agccgctcat agacctcatc tccaacttgc cagacggaga 240
gaaggtgatt ctgatcggac atggcgctgg agggctgagt gtgatccatg caatgcatga 300
atttgttgac aggatecggc aagcattttt cgtggccgcc acaatgctgc cgttttgatt 360
tcaagccgat gaagataaga acgatgggtt accgac 396

<210> 2520

<211> 378

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D10

<400> 2520

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accggccccc ggcgcgtgc cgtacgtgcc agggacgacg ccgggcggcc gatggagttc 120
acgtcgtcct acttccacgc ctctggcaac cccgacctcg cggcgggtggc ctccggcgac 180
ggcggcagcg cgcaggccca ccggccgcgc cgctccaccg acggcgcgaa ggcgaggac 240
ggcaggagcc ccaccaccac aacggcgagg cgcgcgccgt ccatgttctg cgtccccgac 300
acggaggcgg aggagcccaa cggttctctg gacgagtga ccctctgccg caaggcgctc 360
tgcggcgaca tcttcatg 378

<210> 2521
<211> 323
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D12

<400> 2521

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accggcgagc accggggggcg ctctccgtcc gctaccgacg gagcaacgcg ccgagctaag 120
atgtgctagc atacgtatgt agccgagcaa ctgatgtgcg aaatagacgg taagcaactc 180
acttccggcg ccattcttcgg ccacgacggc gccatgtgcg ctgagagcag cgcagtcacc 240
gagttcacgc ccaaggacat ggatggcatc atgaacgact tcgacgaccc ggtgcagctc 300
gcgtggacct gcctgatatt ggg 323

<210> 2522
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D6

<400> 2522

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ccacaaggaa acacgaagca gccaaagaag agacggatgc gcctgccaag gcaccagctg 180
ctgcagccac cgaggggcct gctgcgggag cgcccatgac atggccggat ggcgggcctg 240
agttcgtcaa gatggtcac aagaaccct tctttaaaag cgcacctcca tctggtagcg 300

aagacggcct acccattgac cccactccag aaggcagcat gaactaaatt aaataccaat 360
 tacgataccg accagatatg catggagcat gcaagaatgt tgcgaacga atatatgcta 420
 tgaatggtta catgt 435

<210> 2523
 <211> 393
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-D8

<400> 2523

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 gacgcctggc gggcgtgtgg tacacgacaa ccacggcaag ttcacggccg ggccgtggaa 180
 accgcccac gcgaccttct acggcgggcg ggacgggtcc ggcaccacgg cgggcgcgtg 240
 cgggtacaag gacacgcgca cgcaggggta cggcgtgcag acggtggccg tgagcacggt 300
 gctgttcggt gacggcacgg cctgcggcgg gtgctacgag gtgcggtgcg tggacagccc 360
 tagcgggtgc aaacccgacc cggcggcact ggt 393

<210> 2524
 <211> 351
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-C12

<400> 2524

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 ctgatggggt cgtggcgcaa ggcctacggc gccctcaagg actccaccaa ggtcggcctc 120
 gccaaagtca acagcgaatt caaggaattg gatattgcaa ttgtgaaggc aaccaaccat 180
 gttgaatgcc ctcccaagga acggcacgta agaaaaatac tcttggcgac ctcagcaaac 240
 cgccctcgcg cagacctctc gtactgcata tacgcattgt caaggagatt gtccaagaca 300
 aagaactgga tagttgcgct caagacattg atagtgggtgc ataagcttct g 351

<210> 2525

<211> 355
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-A5

 <400> 2525

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 atcgcggcct cgcccttctt tccagggtcg ccggcgccgg ccgctcctaa gaacggcctt 180
 ggagagcgcc cagagagcct ggacgtccgc ggcgttgccg cgaagccggg agcctcgtct 240
 aatgccgtga gggcgggcaa gacgcgcgcc cacgctgccg tccccaaggt gaacgggtggc 300
 aagtctgcgg tggcggatgt ggaacacgag accgtaactg taccttcgtc ggtgc 355

<210> 2526
 <211> 386
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-027-Q1-E1-B12

 <400> 2526

 acaacaccct agactgagtc gtaatacaac cgcggcctcg catccggtgc ggaggtctgc 60
 aattgggggg aggctcctct ccgccgttgg aaccgctgcg gcgtcgcagc ctgtgcgact 120
 ttctgtctgg ttctcatcc ctcagggaca gattttgcat tctttggcat tactgtttga 180
 tggcagacag tagtgctcct tctctgtgga ggcattgggg caaaaggcag ttgaactgaa 240
 cgggcacatc aatagtctct ggctccaag ggaaattggg aaattcagat tgaacgtggc 300
 tgcacatctt ttctttcat tggctctttc agcaacagcg atccattctc gtanggggga 360
 gagagagaga gagagagagg gagaga 386

<210> 2527
 <211> 383
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-B3

 <400> 2527

tcgcggggccg atacaagact ctacagtgag tcctattatc cccgctctct gtctcgccgc 60
 ccggggagaa ggagggtcc tccgctcgcg gggaagagca cgccattgcc tccgccgcgc 120
 tgactgggga agatggttgt ccaggagttc agagttgatc tcaacaagca ccttgttttc 180
 cagggtggcc atcttgaaga acggtagcat caatgggttc aacaaccgat cgtttagcaac 240
 gaggggtccac gcgtttgcgg gaatgatgtc ttggagttct tgactcacac gaggtgggtgg 300
 gctgtgccaa ctatatggct gactgttgtc agctgcctgc tcgtgaaatc tattctgatg 360
 ggcatatcg ttcatgacgt agc 383

<210> 2528

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-B5

<400> 2528

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 aatgttcatt gggaagcaat cacggctata tcaaacttgg agcattgctg gatattcttag 120
 ctctaagatg ttattggact gtccggagat ggcatccata ctagtatgcy atgaagactt 180
 cgagctgctg gaaggttgtg cttgcagctt gaataagaat gctcgcacca aatgctcacg 240
 tcgtgcggcc aagtcgcagg ttcttgtgta gttccatgcc tgttcttgac caaaagctg 300
 caacgctcct tcaacttggt gtaattgttc gtcacagaag ctggcactag ttactagtta 360
 cttaagcaga atgattcaca aacaactatg ccgatttttt t 401

<210> 2529

<211> 322

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-B7

<400> 2529

caagcctcta aataaactct tattagtggg atgaacatat attctggatt ggatccaaca 60
 aatgtttgtg aggatcatatc gggtatgatg atgcttgtga gttgtgtgta agggggaaag 120
 tgcattgaac atttcaaggc tgtggtatta ttggttggaac gtctatgctc attgggttta 180

cactttttatt tcacttttctt tgagttacac aaaagctcac gagtttgtgt atgcatattc 240
 cgcgtaggta gtcttcatct acagaggagg ttgttttaat tttctatgca ctctacagtg 300
 caaaaatata ttttacacag cc 322

<210> 2530
 <211> 428
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-027-Q1-E1-A4
 <400> 2530

ctcgcggggc gatacacgcc tcaagtctaa gtctcctcac tcaccatagc gcccgctctg 60
 tcgcccttcg ttcacctctc cttcctctcg tccctgcctg ccaggagag gggaagtcag 120
 aggcacggag tggcgcagag cagacgcccg tgaaccattg tagctgtccc tgcgtcgtc 180
 gtcgtcaacg aaccacaca aggaaggat ggagaagaag ccgaccatcc tcatgaacag 240
 gtacgagctc gggcgcacgc tcgggcaggg caccttcgcc aagggtgtacc acggccggaa 300
 cctcgcgtcc ggcgagagcg tggccatcaa ggtcatcgac aaggagaagg tgatgcgcgt 360
 cggcatgac gaccagatca agcgcgagat ctccgtcatg cgcctcgtcc gccaacccaa 420
 cgtcgtgc 428

<210> 2531
 <211> 269
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-026-Q1-E1-G3
 <400> 2531

acaccctaaa gtatgtcgta ttataattgc gccactgctc gttatcctcc tcttgcatcg 60
 cattgcaggt cgtagttgag cagcagcaac cactgcacag gatgtcgtgg cagacgtacg 120
 tcgatgagca cctcatgtgg cgagatcgag ggccaccacc tgagctctgc cgccatagtc 180
 gggcacgacg gcgccgtttg ggcccagagc accgcattcc cacagttcaa gccagaggag 240
 atgaccaaca tcattaagga cttcgacga 269

<210> 2532
 <211> 217
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-G6

 <400> 2532

 gaccacaag tccaaaggaa gtcggttaa tcacggtggt catggacgcc ctccactacg 60
 cctaccgggt ccatgtcgtc ctcatcggac acgtgaacca cgtgcaagtt gatccaacgg 120
 gcctgtgcaa atacacgcat gcaacgttct agcggcgtgc agaactcgtc tggcaacacg 180
 gcggagacgc gctgagagta tcagcgacag cccacgc 217

<210> 2533
 <211> 342
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-H1

 <400> 2533

 ggtcgagaca agcctctagt ataattcggg ctatggctcc gcctcgcgcg cccgatccgg 60
 gccgtcctcc ttttttcccc tcttatattt gatcggtttc tttgcgtcgt tcacgcaggg 120
 atcgtcggag aggaatcgca aagagggccg tctcatccga gttaaggaag ccatggagca 180
 caaggaggct gggtgccagg ccccgaggg acccatcctc tgcataata actgtggctt 240
 cttcggcagc gcggcgacca tgaacatgtg ctccaagtgc cacaaggaga tgataacgaa 300
 gcaggatcaa gccaaagtgg ctgcctcctc tatccacagc at 342

<210> 2534
 <211> 335
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-H12

 <400> 2534

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 cgtcttcaag gaagacgggc aggagtatgc gcaggtgacc ggatgctcgc aacggcgggtg 120
 ccaggccacc tgcgtggacg gcacgcgtcg cctctgccat atccggggca agatgcacaa 180

gaaggtgtgg atcgcgcccg gggacatcgt cctcgctcggc ctccgcgact accaggacga 240
 caaggccgac gtcacctca agtacatgaa cgacgaggcg cgctgctca aggcctacgg 300
 ggagcttccc cagacgctca ggctcaacga gggcg 335

<210> 2535
 <211> 309
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-026-Q1-E1-H3
 <400> 2535

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 acagacagca cgaaggctgt gcangaggca tgggcatcgg cgtgcggcgg cactgggaag 120
 cagacaatcc tcatacccaa gggcgacttc cttgtcggac aactcaactt tacaggccct 180
 tgcaagggcg acgtgaccat ccagggtggat ggcaatctgc tggcgaccac ggacctaagc 240
 cagtacaagg accatggtaa ttggatcgag attctacgcg tggataacct ggatcatcacc 300
 ggcaagggg 309

<210> 2536
 <211> 201
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-026-Q1-E1-H4
 <400> 2536

actcgcatca tgacacgccg gagtcggtgt ggaagaactg ggtgtggcac tccgagaacg 60
 acctcttcat ggaaggcgcc tacttcaccg tcaccggcgg ccagatcaac aggcagttca 120
 acaagaagga cctcatcaag ccaggaacg gggtccttac gtcaacaagc tcacgcgcta 180
 cgccggctcc ctgcctgca c 201

<210> 2537
 <211> 296
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-H6

<400> 2537

ttactacacc ctgacgtgag tcgtattacg gactcgcgcg tcattcttga cgtcacgtaa 60
ctctccaaga ccatccagct ggccggctgg acagccatat gctaaatcgg gatcacggac 120
aaggtgacgc tcgcggaatt caactgcact gggccgggca ctgacgtgac gaaccgcgtg 180
ccatggtcgc ggaggttctc atctcgacca cacagccaag tacctcacga tcgacttcat 240
caactgcaag gactggctgc cggcgtacta ctactgatcc gacaatcgac tgctgg 296

<210> 2538

<211> 308

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-H8

<400> 2538

gagtcatgtt acaagaacaa gtatctcgct accaacaatg gcctccaggt cctccatcct 60
acttgcaacg tcgatgctgg ctgcgctgtt tgcggttggt ttgtgcacca ccccgctcac 120
cttcaggtt ggcaagggat ccaagcctgg ccacctgatc ctcaccccca atgttgcaac 180
catatccgac gtggagatca aagagcacgg gggcgatgac ttctccttta cgctcaagga 240
gggcccgaac ggcacctgga cgctcgacac caaggccccg ctcaagttac ccctttgcat 300
ccgctttg 308

<210> 2539

<211> 218

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-027-Q1-E1-A11

<400> 2539

tgaggtggct gccgccgccc cgcgcagcgg acggcgagat acccttcgga cacgacgccg 60
tcgccttgct cttcttcgtg gcgtgtgtgg ccggcagcgt cgcgctcgcg tcgtcgatgt 120
gctcgggatt ccgtcgcaag cgggacgcgg ccaccctgtc agaccgggcc gcttcggggc 180
agtcgagcgg gacgggctcg ggctccgtcg ccggtggc 218

<210> 2540
 <211> 94
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-027-Q1-E1-A12

 <400> 2540

 ctgacagcga cgatgatgcc acaactgcgt cgctcgtcg cgctgggcct cgtggccacg 60
 ggcagtagcg cggcgcccg gcggtgggtt tgtc 94

 <210> 2541
 <211> 229
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-G10

 <400> 2541

 gaccacacg tccagagcta gtagccagc cagccagcag ccagcttgct cgccgcgccc 60
 gtccttcttc ctgcctccg ttccgttccg ttccgtcccg cccgcgcgcg ccgacgcatt 120
 cagggatgga catgacgagg atcgccagcg ccgtcctcgt cggccccgct gtggacatcg 180
 tggcgctctt acctgaaggt ggagacgttg gatttcatgt cttcggttg 229

 <210> 2542
 <211> 291
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-A9

 <400> 2542

 ccgggcagca tggcggagat cagccgtctc ctgccacctg tgcgtgtttg ttatcggtgc 60
 attgatctct acgacggcat cggtgacggc gaccacagtt cagtcacgga aggcggggct 120
 cattacctcg cggtcagac gcaactggatt ccgggcctag ctgatggatg tgctatagcc 180
 ggacaataca tcgggagaaa cttgggcggc accggcgctc ataggcaacc gcatgttctc 240
 atgatgcgac ttctgtcttc gttgactcat ccagatgcag ttacaccgac c 291

 <210> 2543

<211> 194
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-B5

 <400> 2543

 cggaagtccg gatcgaccac acgtccgaaa aaattatcga ggcaaaagtg agatataaga 60
 aataaagttt acagcatgaa atggattgaa aaaaagtgga agtaaataac tgaaataaaa 120
 aggtggaagc tctataggat gacgttactg tgttgtaagc gtagatcaca aaagtcttat 180
 ctatggggac ttgt 194

<210> 2544
 <211> 411
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-001-Q1-E1-H4

 <400> 2544

 ccgggtagat ccaaatgtct gcacaacttc acctgtgtat aaaggacgt ttctcatggt 60
 tgctacaaga ttaaggcgtg gtccccatac tgagtacatt atatctcttg atgcagagga 120
 cttatcaciaa gggagcaatt catacatggg aaaactgaga tctgatttct gggggacaaa 180
 cttcaaaata tatgatagca agccaccata tgacggcgct aaagcatcaa gtagtcgac 240
 tagtcgtcgt ttcggaagca gaaggattag tccccaagta tcgtctggta actatgaaat 300
 tggacaggtt tcatacaaat acaacttgct caaatccaga cgcccagga gaatgaattg 360
 cactcttgaa tgcccttcag cgcaagagac ctgggaaaac tcaactcaaga c 411

<210> 2545
 <211> 444
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-001-Q1-E1-F1

 <400> 2545

 tccggtactc ccgggtgccc ccacacgtcc ggaaataaat agttcgtgaa tccctgaagc 60
 gtgcatatat atattcctgc caagataaag gtaatggagt cgtcacgcag gttccagccg 120

gccgtcatcc tgctttctct gctcattgtg tccaccgata tggcacaggc aaggggaatgc 180
gagaagtaca gtgagcgatt tgttggggca tgcattgatc cagacaactg cgccaatgtg 240
tgccgcggtg agggcttctt ggccggcagg tgcagcacct tccgccgcgc ctgcatctgc 300
actaggcagt gctaaacaag atcgctcgat cgttcgccat gcatcgacaa cctattctta 360
ataacgttca ttatctcggt cttatttatg acgaatgtca tgtatgttct ggtgactgtc 420
atgtatattc tgatgactgt catg 444

<210> 2546

<211> 335

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C3

<400> 2546

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ggcctgctgc ttctactact ggccggggcg tcgacagcga cggcgcatct caccgtcggc 120
gatgtggatg agtacgtgtc caagcgacag caggagtccc gccacaggaa caacggtggc 180
gcgggcatcg atgacctcat ctccagtgcg gcgcgcttcc acgccaacgt ggatgcacgc 240
gcctatggcc gtagatccga cctgcaggac gaggcaacag ctaccgtaat agccaaagcc 300
gaagcacaag aggcttcagc tgaagggtggc gatta 335

<210> 2547

<211> 146

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B11

<400> 2547

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cgcccgtcct caccagcgcc tctcgggtcg cgttcccggc cgtcggcgcc gtgctggggc 120
cctccgtgct ctccttcttc gcctac 146

<210> 2548

<211> 376

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-B4

<400> 2548

gcacgacgag gacgaagccg tgcccgaagg aaaaagacgt ggcggttgta agggaggatg 60
tggaagcgga tgcggagaca gagacagaga ctgaaagcga ggctgaggca gaggtcgagg 120
ccgangtgga cgtcgagggtg gaagcggaag ccggtgcatc gtctgcgaag aagaaccgta 180
tccagggtgtc caccaacaag aagccgctct atttctacgt caatctcgcc aagagggtaca 240
tgcagaacta cgacgagggt gagctctccg ctctggggat ggccattggt aacctgggta 300
acgtcgctga gatcctcaaa aacaatggcc tcgccactga aaagaacatc ctcacatcaa 360
ccatcggcac caatga 376

<210> 2549

<211> 341

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A12

<400> 2549

gacaagccgt ctactggctc atgttcgtct ttgtcttgat gcgattgac tctacgacgg 60
tcaaggtgac ggcgacaaca gttcagtcgc ggcaggcggc gctcagtacc tcccgcacaaa 120
gatgctctgg attccgagca tgacggaggg atgtactgtg gccggacagg acagctgggtg 180
aagcttgggc gccaacggag ccaaattgtca aaggcaacgt cgcattgagg cacttcgggtc 240
gtcgttgact catccacatt cagtcacacc cgtccaatcg acatcgtttc atgacagatc 300
gaccagctag ttaacatttc ccatctcact ggcgtgtggt a 341

<210> 2550

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A4

<400> 2550

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cgccatgggc agtgctggcg gcggtcctcg tcgcggcgca ggtggcgtct gcggcgccgg 120
 tcacggcgcc agcgttcctc tgggcgccta agaactacgg attccgctct gatgatgcta 180
 aggaggtagt ccattatcaa acaatctcac caaagaactt agctaaatct gttcttgagg 240
 aagggtggctg gtcaaccttt atgtgttcaa gggaggatac tgagaagcat gttgatgttg 300
 ccattgtttt tattgggtca aagctacaat catcagacat atcgaaagat aagcaagttg 360
 atccagcttt agcagataca ttgaagctct ctttcacaga atcagagttt tctatggcat 420
 tccccacgt ttccacatca gacga 445

<210> 2551

<211> 511

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-G8

<400> 2551

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 catgagaatg ttgtccaact cgtcggatac tgcgccgaag ggagcaccca cgtccttgct 120
 tatgagtatg caactagggg atcattgcat gatatcctcc atggtaataa ggggtgtcaaa 180
 cgagcccatc cagggccagt cctgtcatgg atgcatcgag ctaggattgc cgtatgtgct 240
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 aattcaagca gcatactgct ctttgaccat gatgttgcca acatcgggga cttcgacatc 360
 tcaaaccagt cccctgacat ggctgcgcgc ctccactcta ctgcggttct tggcaccttt 420
 ggctatcatg caccagaata tgccatgact ggacagctta gcacgaccag tgatgtctac 480
 agctttggag ttgtgctgct ggagctttta a 511

<210> 2552

<211> 504

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H1

<400> 2552

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cacactgcct ccgcatgcgg caagatcctc cctcattccc caaacatgag aggagcagag 120
 gaggagagat ctggcgccgc cactgatgcg ggaggagagg aggagaaacg ggagaggagc 180
 gtccgcctga tggccggcct catggacaag gccaaagggct tcgtgggtgga gaaggtgacg 240
 caaatcccca agcccgaggc tgcgctggat cacgtctcct tccagagcat cagccgcgag 300
 ggcgctgagc tgcatagccca cgtcgacatc agcaaccctt actcgacaccg catccccatc 360
 tgcgagatca cctacacgtt caagagcgcc ggcaaggtga tagcgtcggg cacgatgccc 420
 gaccccggtt ggatcgggc gagcggcagc accaagctag acctgccggt gaaggtgccg 480
 tacgacttca tcgtgtcgct gatg 504

<210> 2553
 <211> 486
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-H10

 <400> 2553

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 cgcgcgcgga gcggatcatt gcggagggtga tgcacacgaa gcagatggcg aacccgacga 120
 cgcccgcggg cctgtctcgc gtcacatcc acgactgctt cgtcagcggg tgcgacgcgt 180
 cgggtgctgat cgcgctccacc cagttccaga agtcggagca cgacgcggag atcaaccacg 240
 ccctccccgg ggacgccttc gacgcctggg tgcgcgccaa gctggccctg gagctggagt 300
 gccccggggt ggtgtcctgc gccgacatcg tcgcactggc gtcgggcgtg ctgatcacca 360
 tgaccggcgg gccccggtac ccggtccgc tggggcgcac ggactcgctg tcgtcgctgc 420
 ccacggcgcc cgacgtggag ctgccgcacg ccaacttcac cgtggaccgc ctcatccaga 480
 tgttcg 486

<210> 2554
 <211> 309
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-049-Q1-E1-H11

 <400> 2554

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 cgactccgtc agcatccccg tgcgcgggtg ggccgcggag gagatggaga gggaccagga 120
 cctctgtac accgaccagt ggggccgccc caactacgag tacgtctcgc tcggctgcga 180
 cgccatgccc gtcctcaagg gacgcaagcc cgtcagtgct tacaacgact tcatgcccc 240
 gttccgcgaa cactttgccc actacctccg caacaccatc ctggaaatcc aagtccgcat 300
 gggccccgc 309

<210> 2555
 <211> 498
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H2

<400> 2555

gggtagaccc acgcggccgc gcagacgctg gcacccctga ctcaaccaac gagggcaagt 60
 gcaccccggt gtcgacgcag gtgcgctact tcaacggcac caaggcgaag atggtcgcca 120
 agaagggcgc cgccgcgggt agcaagctgc tggccgactc cgtcaccctc atgggcatcg 180
 ccaacaacga cctgttcgtg ttcgctgccg ccgagctgtt gcggggcagg tcggccgccc 240
 agcagaagag cgacgccgcc gcgttcctca ccgacctgct gtccaactac tcggccgcca 300
 tcacggatct gactccatc ggccgcgagga agttcgccat catcaacgtg gggctggtgg 360
 ggtgcgtgcc ggtggtgcgg gtgctggacg cggacggcgg gtgcgccgag gggctcaaca 420
 agctggctga agccttcgac gtcgcgctgg ggccgctcct cgccggcctc gccgacaagc 480
 tgccggggct gacctact 498

<210> 2556
 <211> 472
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H3

<400> 2556

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 ttgggaaggt ggacgagtta tttatcgaca tatatgacag atatgaacct accaatgact 120

catcagcaga caattgtttc atctcaacaa gttatgatgc cacaacacac tttgagtcca 180
ctgttatgga tgtactttcc ctttacacaa agatcaccgg aaagactggt gatctcagcg 240
tggatctaag cgctgctagt gctgctgaag atgatatgtg atacttatcg tagtgctatg 300
tggcgtagtg tggaaaatat ttaattaagc tttgctttgg caacgattat taggttcacc 360
tttatttttc caattgttgt tattagctgt gttgtgacca tgattaaaga ttgcatgctg 420
taaatttgaa ggcatttttt tatcaaaagt tgttacgcgg tgattcgtgt tt 472

<210> 2557
<211> 312
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H7

<400> 2557

aacaccctat agagagtcgt attaaatagc aagtgtgatc atccgttgat ccatcttgc 60
aataaccctg cgtgcccttc gttctcgtct cgatcccgac gacgctccct tcggctccgg 120
caaaccacat caagtcgcga tggagatgaa gaaggtcgcc tgcgccgtcc tcgccgccgc 180
cgctccgcc accgtggtcc tcgccgccga ggccccggcg cccgccccca ccagcgctc 240
ctcgcccgcg ttccccggcg tcggcgccgt gctgggcgcc tccgtgctct ccttcttcgc 300
ctactacctg ca 312

<210> 2558
<211> 482
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H8

<400> 2558

gggtcgaccc acgcgtccgt gtaaagtga gaaccatgtg gtcgtcgatg cgggcacagg 60
ttgcgatggt tgtggcggtg gtgttcttgg tgagcggcgc atggtgcggt cctcccaaag 120
tccccccagg caagaacatc acggccacct atggcaagga ctggctggac gctaaagcga 180
catggtatgg caagccgacg ggtgccggtc ccgacgataa cgggtggcggc tgcgggtaca 240
aggacgtgaa caagcccccc ttcaatagca tgggcgcgatg cggcaacatc cccatcttca 300

aggatggtct ggggttggtg tctgtctcg agattaagtg cgataagcct gtggagtgt 360
 ccggcaagcc cgtggtggtg cacatcacgg acatgaacta tgagcctatc gcggcgtagc 420
 acttcgattt agcaggcaca gcgttctgcg ccatggtcaa caagggcgac gaggagaagc 480
 tg 482

<210> 2559
 <211> 447
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-049-Q1-E1-H9

<400> 2559

ccacgcgtcc ggcgcagaag cattctgaag cagccaatgc tgtggagtgt tgggatagca 60
 gtgtacctgc agatcatcca aatgagaaga cttttgtggt gggatttgag gaagtccatg 120
 aatcagatgg ttcgccaggc tcgcatggac aatctacaaa ggacagcgcc ctttctgcga 180
 acggtggtgg ggcagcaaag agcaactaca tatcgcccgcc accaacacgc atcgctgtcg 240
 accgcaacgg cagtgtgaag aatgcttccg tcgctagggc caacttgaca tctcctcggc 300
 catcagagat catctctgcc agggacagca attccacgac ccagcaagaa gtgaaagcgc 360
 tctctctca gatgtcatct gtgcgggggc tcgatggttc ttccagtga ggaatctcta 420
 gccccgggta cagcgctccg aacgaag 447

<210> 2560
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-A3

<400> 2560

ttcgcggtc caccacgcg tacacgtatc cctgttctc gagcatctca acgagcttct 60
 gctccgacga ctacgacgcg ccgccacagc cacatggcgg acgacgccgt cgcgccgggt 120
 gcggccgttt gctgcgcagg gccgggctcg ctgtcttcta tcacgaagca gcagcagcag 180
 cccgacgacg ccggctgcgg cagcagcagc agcgacgacc actaccagca cgacgtgatc 240
 atgctgaggc ggactaggag cgggcgggca ttcccgccgc cgatctccgt gatcggcaag 300

ggcgggcggc cgtggctctg cctgcgggcg caccgcgagg gtggacgcct cgtgctgcgg 360
cagatgcgcc tgccgtcgca ggagctgctg catccctgca aggacgacgg ca 412

<210> 2561
<211> 400
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B11

<400> 2561

acgcgtccgg agagccaacc ccatcatcat cgaccagtac ttctgcccc agaaggtctg 60
ccccggcaag cgaagcaact cctcgcatgt ctccatcaag aacgtcacct tccgcaacag 120
cggccggcac gtcgtccacg cccgaagccg tcagcctgct ctgctccgag acgcagccgt 180
gcagcggcgt ctcgctcatt gatgtcaacg tcgagtacgc cggcaagaac aacaagacca 240
tggctgtgtg cagcaacgcc aagggaaccg ccaaggaag cctccaggcc ctggattgcc 300
tcgtctgacg gatgacctg catttgcatg cattcttctt ccgtttcact ttccatatt 360
ctattgcgtt ccagccaagc atcttgtttc ttttagatat 400

<210> 2562
<211> 412
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-B6

<400> 2562

gggtccaccc acgcgtccga aaaaacagcc gagcgatctc ctctccctct ccctctccga 60
tccattctcc agcgcagcga agtaaactg tctgaccggg caaagatgtc gtggcaggcg 120
tacgtggacg agcacctgat gtgcgagatc gagggccacc acctcgcggc ggcggccatc 180
gtcggccacg acggtgccgc ctgggcgcag agcacggcgt tccccgagtt caagaccgag 240
gacatggcca acatcatgaa ggacttcgac gagccagggc acctcgcgcc gacaggcctg 300
ttctcggac ctaccaagta catgggcacg caaggccagc ctggtgccgt catccgtggc 360
aagaacggat caggaggcat caccgtgaag aaagacaggc aggactcgt gg 412

<210> 2563
 <211> 397
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-B8

 <400> 2563

 ttcgcggggtc caccacgcgc tccgatcccc tgttctctga ccacctcaac gagcttctgc 60
 tccgacgacg acgacgcgcc gccacagcca catggcggac gacgccgtcg ccgccggagc 120
 gggcgtttgc tgcgcagggc cggcctcgct gtcttctagc aggaagcagc agcagcagcc 180
 cgacgacgcc ggctgcggca gcagcagcag cgacgaccac taccagcacg acgtgatcat 240
 gctgaggcgg acgaggagcg ggcggggcatt cccgccgccg atctccgtga tcggcaaggg 300
 cggggcgccg tggctctgcc tgcggggcga ccgcgagggg ggacgcctcg tgctgcggga 360
 gatgcgctg ccgtcgcacg agctgctgga gccctgc 397

<210> 2564
 <211> 451
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-C10

 <400> 2564

 taccggctct gatttcccgg gtccaccac gcgtccgaga agacagagac tgaaggcgag 60
 gcggaggcag aggtcgaggc cgagggtggag gtcgaggtgg aggcggaggc cgggtgcatcg 120
 tctgcgaaga agaaccgtat ccagggtgtgg accaacaaga agccgctcta tttctacgtc 180
 aatctcgcca agaggtacat gcagaactac gacgaggttg agctctccgc tctggggatg 240
 gccattggta ccgtggtgac cgctcgctgag atctcaaga acaatggcct cgccactgaa 300
 aagaagatcc tcacatcaac catcggcacc aaggatgagg cgaatggccg gcttgctcgt 360
 aaagccaaga tcgagatcct gctgtgcaaa tcagaaaact tcaacagcat catgtcgagc 420
 aagaagtccg agcgcccga gcccggccg g 451

<210> 2565
 <211> 449
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C11

<400> 2565

cggtcctgat ttcccgggtc caccacgcg tccgaacaga tcccgtcct gtcgccgctc 60
gtcgtgtcgc ccatggtgcc ggtctgggag gcggaccaga cggggggcgc caggaaggag 120
ggaggagggg accaggccga gggcaggagc ggtgccgagc agcagcagcg cggcgccgcc 180
gctcggcatg gcagcagtgg ggagcaccag gtgcacgacg tgacaccgag gccgtcggcg 240
cccgcgctcg gcatgggggtg gcggcaccca gcgatgtcga cggccgtggc ggagccggcg 300
tcccttgtgc ccttattcca gtgcagtgcc gcgttgaggg tgcgcaacgc gcagcagtga 360
gggggaatca tttgtcaac caagcagcca tgcccatagt gcgctcgagc tcgtgtcac 420
gacaggcgcc gctacgatgt gagaagacg 449

<210> 2566

<211> 462

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-050-Q1-E1-C12

<400> 2566

accggtcctt agtccccggg tccacccacg cgtccgacca cttcagtgtc tgcgatcgcg 60
tcggccacga tctcttgcca aaaagcttac cctgtgtctg tctgtccgac cgtcagtcgc 120
tctaacaatc gatttccatg acgacgtcgc cgcgcgtgtg gctgctcgcc atggcactgg 180
cgctcgcttg cgtgctgtc gtgaggtccg ccgacgtgc tgccgaggcg tcnccgactc 240
caggcgggctc cacctacggg tgcaaccggc ccacggacaa gtcgtgcaag cccgagggcg 300
tggggggtgt gctgccgggc ggcgccatcg acctcgacgg cgacggtgac gaagacgagc 360
tgccgcagtt ccagccccac ctcatgatcc tcggccatgg ccactgatga gtgtaaatgg 420
ttggttggtt ggtcgtcctc agccgatcta ctggacgaca cg 462

<210> 2567

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C3

<400> 2567

ttcgcggggtc caccacgcg accgacgggt cccagcccca acccctgtca tctccactgg 60
cagagctcag ccaattgcag taccggccat tcatctggaa gagctgaagg aaattacaaa 120
aaacttcagc agtgatgcc tcatgggga gggctcgtat gccagagtct attttggtgt 180
gctgaaagat gggacgaaat ctgcagtga gaagcttgac tccagcaaac agcctgatca 240
agaattcctt gtgcagggtt cagctgtctc aagattgaag catgagaatg ttgtccaact 300
cgtcggatac tgcgccgaag ggagcaccgc cgtccttgct tatgagtatg caactacggg 360
atcattgcat gatatcctcc atggtaaaaa aggtgtc 397

<210> 2568

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-C6

<400> 2568

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gaaatcaagg acctgcaaaa actatctgac gagctccatc tcaaagataa taagggtgcta 120
cagaggatct ccaagctgcc catgcttcgt tccctcatta tcgatgactg ctcaaagttg 180
aagcatgtgg caggtcttga tgcgctgcag cacctcagac ttgtctttcc tccgtccacc 240
gagacatttt atttcgaaga gctagtaatt ttctggagcg ttgccttccc acgggtggctg 300
gagctactga ttcagaagtg caaaggcctg cgacggtttg agttgcagtg tcgtctgtca 360
ttgc 364

<210> 2569

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-D10

<400> 2569

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atggcggttca tcagcaatat cgcagtgaag gcggcgggcg tggccgcgct gctgctggtc 120
gcagcggtgt cgccctgccgc gcgcgcggcg gcggtggcg tggcgggagg ggcgcgctcg 180
gtgccggcggt gtccgctgga catcgcgag ctgggcgcca agggcgacgg caagtccggac 240
agcaccgccga tgatcctcaa ggcgtggaag aacgcgtgcg aggcgacggg ggtacagaag 300
atcgtcatcc cgccgggcaa ctacctgacg ggccgggctgg agctgaaggg cccctgcaag 360
tctccatca tcatccgtct cgacggcaac ctgctcggca ccggcgacct cagcgcgtac 420
caaaggaact g 431

<210> 2570
<211> 448
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-050-Q1-E1-D12
<400> 2570

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gtggagagca gtggcggcgg cggcgacggc agcgcgggga gcgacgaggc ggcacgtcc 120
atgttccaga ggttctggga ctccgccatg gccttgggcc ccctggacga cgagacggac 180
accagtccc agatgagcga ggcgtcgagg tcgcagatga tgatgtccga tgtccaccac 240
caccaccacc accacgactc cgccggcggc ggcagcgagg cggggttctc gctgtcgtcc 300
ttctccttca agtccagga caggcgaagg cggatgcacc gcttcagctg tgagggtcag 360
agcttgacgc ctctggtgac ctgcacctc cggaggctcg gcgccgacat cgaccctgac 420
cgccctaccgc aaatcctgta cgaagacg 448

<210> 2571
<211> 418
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-050-Q1-E1-D7
<400> 2571

cccacgcgtc cgaggacgcg tggggccgcc gccactaggg gcggttccag ccaccgtcgc 60
catggcgtag ccttcggtca attcctggcg gcatttcgcy gcggcgcaag gatccggcct 120

gcgcggctcc gcggcggtgc cagcacgcga ccccgcggcg gcggggcgggc acggccttgg 180
cgcgtgcccc ccacgcatcc tggcgcccc gacggccagg gcgcggccca ctggcgcggtg 240
gccggccatg gcggcccctg gcggcgcggt cccgcacggg tgcgtcgccc gacggcctgc 300
gcgctgccgt cgctcggtc agacgggcct cggtcagcgc gggcaggcac gacgagcgcg 360
tgcgggcggc ctctccggc caaggcggcg cgtctcgtgg cccaggccat gggcgccc 418

<210> 2572
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-E1

<400> 2572
gggtccaccc acgcgtccga gctcactcca cctcgctcat gtccgctcac cggggcgggc 60
tcagcatcct ttcgaagaag taacacttct ccgtgaggcc tgagcccctc gccgcggtga 120
gccaaagccgg cgcacgtcgc cccggggctc acgctcacca ccgagcccca accaattaat 180
aatatatata tatagctagg atcgatcgtc agtaaaatgg caggctccgc cgtcctgagg 240
agccccctgt ccgtcctcct ctacatcctc gccgccgtgc ccgccaccgc cgcggcgacg 300
ccgaccgacg ccgccatcga cgaggcgtag gcgcatctcg tcaacctcac cgctaaccag 360
gagtactggg cggagcgcg gcggggcggc cagcggtaca accgcgcggc gtaccagacc 420
gaccctgtggc cg 432

<210> 2573
<211> 404
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-050-Q1-E1-E12

<400> 2573
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gattgcccgg tgetgcccta caacacgtgc cagagcccca gcaaggcana gtcgtgcagc 120
tacttccaga agacgcagga cggcacggtg acgatcggca tctaaggga aggagaaggc 180

gacggtgacg gtgtcggacg ggcggatggc caagctcccc ggtctcatcc tgggctgctc 240
 cgctectggaa gccggccgca gcgtaggacgc ccacgacggc gtgctgtcgc tggggaacgg 300
 cgacatgtcc ttccgctcc acgcccga gcgcttcggg cagcgcttct ccttctgcct 360
 gctcagcgcc aacagctccc gcgacgctc cagctacctc acct 404

<210> 2574
 <211> 423
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-E5
 <400> 2574

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 cacaagcatg tctggcatca tcgacaagat ccaggagacg ctccacatcg ggggcgacca 120
 caaggaggag cacgagcaca agaagggcga ggagcaccac aagaagggcg aggagcacca 180
 caagaaggac gacggggagc acaaggaggg catcgtggag aagatcaagg acaagatcac 240
 cggcgagcac ggcgacaagt cggcgacca caaggacaaa gaccataagg agaagaaaga 300
 taagaagaag aagaaagaga agaagcacgg cgagggccat gaccatggcg atggtagcgg 360
 cggccacagc agcagcagca gcgacagcga ctgatctcgc ctgcgcgagc cccgtgcgca 420
 cat 423

<210> 2575
 <211> 278
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-050-Q1-E1-F10
 <400> 2575

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 cagcagcagc agcaagccca cccgttcgac gacatggccc gcctcggagc cggcgccgtg 120
 ggggcactcc tagtggcagt cgcgctgta tccgcgttcc tcgcggtgcc ggctcggct 180
 aagtccgggg aactgagcac gataggggtg ctggcagcga aaggcagcag aggcaccggc 240
 acgcagaaat gcacgggagc cctgtgctac tgctacgt 278

<210> 2576
 <211> 295
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-F4

 <400> 2576

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 catgcaggtc tttccaaggc gtacgtacta tatcaaatta ttttaatttc cttacatgta 120
 tatgtatgtg ctgctgttgg atacgtacgt atatatatat gttctagggt ttccggttcc 180
 ggccttggtta catgcatgaa gagaagaaac acaatgaata aggcctttat tgattgtgtt 240
 tcttctcttc atgcatgtaa cacaatcaat aaaagcctta ttcatttatt atgta 295

<210> 2577
 <211> 436
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-F5

 <400> 2577

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 gaaggctcag aggagaagaa ggcgagacgt gcagtcctgc gggcacgat cgagaacagg 120
 gaagcaagag gctgctagag atcgagctca tcaaccaacc aagtcgtacg tcgtcagcat 180
 cagcaccgga tggcgctgct cgcgtccagc tatgtatcca ggaggggggt ctccgcagcg 240
 atgacggtgg cggaggagtc cgtgaagaag gtggaggaca aggcggtgaa gctgggaact 300
 gtggccaagg acatcgccag cgccatggcc accacgacgg aggagaagac ggcgttcttg 360
 gaacctgacc ccgagaccgg atactaccgt ccggtcaccg gcacgaagga ggtggacgcc 420
 gccgacctgc gcgccg 436

<210> 2578
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-F6

<400> 2578

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gagccgcagc atggcatcat cggccgcgct cttggtgcta gccctcgcgc tagtggcggc 120
caccgccccca caggtagcgg aggcaaagaa gaagagagcg gcggagagcg gcgaggcggc 180
ggaggcgaag aagatccagg acgacttctg ctgcagcgtg tgcgagggca agaaggggac 240
ggacctggtc gtgtgcaagg agtcctgcgc gctctcccag cagtccaacc tgggtgctgta 300
cggcaggatc cagtgcgaagg gcaagtgcac cgagcagaag ggcatacagg cgccggccat 360
gaaggtctgc caggaggagt gcgacaaggc gtacgtggtg aa 402

<210> 2579

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-F8

<400> 2579

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gccaggagga gtgcgacaag gcgtacttgg tgaaggcggc cgaggtcaca aaggcctgaa 120
ggttcacttg cgcaaaggag aagaaccgc gcttcagcaa aaattgcaaa aggtcttgca 180
ccccctctcc tcctgaagcc aaacccttg aatgaatga accccatgca tgcattgcatg 240
catgtatgca tgcgccgggg tgacgtggcg ttcagctcag gcgctgagcg agtctatacg 300
tacgtcgtca ccggtggcc acgcatgca taaccatctg atatggacgg aactatatat 360
tgtattccta ttaatctggc attttctaag ctaattgtt tttttccaaa taatacgtct 420
catgaactca aaatttaatg tcac 444

<210> 2580

<211> 250

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-G1

<400> 2580

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gttccgctat atctcagcca tcatgggtgc aaatgatgct gaaatgcaca ctgggttccc 120
gactgatcta actcaagtag tacatactgg atgagatcga cctcgatcca cgaacaacac 180
caacactaac aacaccaaga ccactactgg acagacacct aactggatga aagattacca 240
ctcggcaccg 250

<210> 2581
<211> 351
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-050-Q1-E1-G11
<400> 2581

cggggcgacc cagcgcgtccg aagacgcgtg ggcggacgcg tgggggacga cgcaccgcac 60
actacccgac ggtggaactc ctgcccgcg tcgctgctcc ggtctccgcg ctgctagccg 120
ccgactgtag gggctgtgtg cttctgaaga gagatttcgt tgaacaggat gaatgcattg 180
gcagcaacca gcaggaactt caagcaggca gctaagctgc tgggcctcga ctccaagctg 240
gagaagagct tgctcattcc attcaggaggag attaagggtt aatgcacaat cccaaaagat 300
gatggaactt tgggataccta tggttgattt atggttcaac atgataaatg c 351

<210> 2582
<211> 333
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-050-Q1-E1-G12
<400> 2582

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ggaagctgtc gacgaagctg ggctcaatat atatgtctgc tggtcaccat ctgagccaag 120
ggaagccggt ggtcagaacg agctcaatga ggctgctgtc gtcggtgaaa cgacgactga 180
accgaaggag ggctaggatc aagccaagat aataaagcaa gtcgactgcg aaactgcac 240
aaaagaagtt gctagtactg gggccgattc aatggacgat gccgctacta tggaaacgcta 300
gccgctggta tcatcagcat cagcaccaca aga 333

<210> 2583

<211> 377
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-050-Q1-E1-G6

 <400> 2583

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 ctagcggggc ggctgctgca cctggcccc aggggtgtcga aggcctgtca ggcaatgagg 120
 atgacgatga tgactccacc aactgaggcc acacatgtcg gcccggttaa atttgaaca 180
 agacatggaa gaaaaatgag agcaatgtct ttaaaacat gaatccataa taatgtgtgg 240
 tcatccatgg atacatcctt gctctccctc tttttctttc tgtttgattt tcaatgtgtt 300
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<210> 2584
 <211> 454
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-050-Q1-E1-H1

 <400> 2584

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 ctgtgcaacg aagcctaaga cgcttgaggg gaaagcccca gctgaggcca ccatctccac 180
 acccaagggt gcacctgaga ccactaccat ccacattgag gttgcggcaa aacatgcagt 240
 agttgagaag gtggaggagg acaaggagga ggcactaaca gtggcggcga aacaagagcc 300
 agcagccacc attgagcctc agcagattgc tagtgaggtg accacttcgg aagtggcgg 360
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<210> 2585
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H10

<400> 2585

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ggggcaggcc ccagctgagg ccgccgtcgc cacacccaag gttgcgcccg aggccactcc 180
aatctccgtt gaggttgagg ctgatgaaca ggtagctgag aaggtggagg tggaggagcc 240
ggctgcggcg gccgacgttg agcatcagaa ggctaagtag gtggtcgctc cagatgcggc 300
cgtcggcgag ccgcatcaca aggaggagga agccgtggag aagaccgtcg tcgaggagga 360
gaagccagcg gcagccgcca atgcagagga aaaggtcgcc accgccgccg agaccacgac 420
ga 422

<210> 2586

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H12

<400> 2586

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aagaccgggc tcaaggtcca ggccgtcatg tccttcaacc agttgcggcg gcaacttcgg 120
cgattcagtc accataccac ttccgggatg ggtcttgagg gagatggaca aggaccagga 180
cctggcctac accgaccgga gtggccgccg gaactacgag tacgtctccc tgggctgcaa 240
cgcgatgccc gtgctcaagg gccgcacccc catccattgc tacgccgact tcatgcgcgc 300
cttcggcgac aacttcgcca cttcatggg caacaccatc gtggagatcc aggtcggcat 360
gggccctgcc ggcgagctgc gctacccgtc ctacccggag agcga 405

<210> 2587

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H6

<400> 2587

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aacagccagc tcgcgaaaat aatgaagagc cgcagcatgg catcatcggc cgcgctcttg 120
gtgctagccc tcgcgctagt ggcgccacc gcccacagg tagcggaggc aaagaagaag 180
agagcggcgg agagcggcga ggcgcgagg gcgaagaaga tccaggacga cttctgctcg 240
acgctgtgcg agggcaagaa ggggacggac ctggctgtgt gcaaggagtc ctgcgcgctc 300
tcccagcagt ccaacctggg gctgtacggc aggatccagt gcaagggcaa atgcaccgag 360
cagaagggca tcacggcgcc ggccatgaag gtctg 395

<210> 2588

<211> 270

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-050-Q1-E1-H8

<400> 2588

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attttagttg agctttgttc gggggaagct ctctttcaaa cacatgaaaa cttggagcat 180
ttggctatga tggagaaggt cttaaggcct ctcccaaagc atatgattgt cagagctgat 240
cggcgtgctg aaaaatactt caagcgcgga 270

<210> 2589

<211> 326

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A1

<400> 2589

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ggcggcaata atgggtctcg ttccagctcc ggcgacgacg accgccgccg taatcctatg 180
cctatgcgtc gtcctctcct gtgccgcggc tgacgacccc aacctccccg actacgtcat 240
ccagggccgc gtgtactgcg acacctgccg cgccagggtc gtgaccaacg tcaccgagta 300

catcgcgggc gccaaagtga agctgg

326

<210> 2590

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A10

<400> 2590

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cgaacgcgcc cggcggggcg ttcagcaact ggggtggcgat gaaccagcag agctacgcgc 180
tgtacgcgca gaagtccgtc ggggacgggg gcaaggagcc cctggacaag aagctgtcgg 240
aggcggagaa gaacaaagtc acgtacgtgg tggaccccag cggcaaaggg cgactacacc 300
aacatcaccc cggcgctgga ggatatcccg gtgagcatca ccaagcgctg gatcctggat 360
ctcaagcccg gcgctcagtt ccgccagaag ctgttcctga acatcagcaa ccggttcac 420
acgttcgggt cggacccc 438

<210> 2591

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A11

<400> 2591

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ggcgccggcc tcgctgtctt ctagcaggaa gcagcagcag cagcccagcg acgccggctg 180
cggcagcagc gacgaccact accagcacga cgtgatcatg ctgaggcgga cgaggagcgg 240
gcgggcggtc ccgccgccga tctccgtgat cggcaagggc gggcggccgt ggctctgcct 300
gcgggcgcac cgcgaggggtg gacgcctcgt gctgcggcag atgcgcctgc cgtcgcagga 360
gctgctgcag ccctgcaagg aacggcaagg gaatgatagc tagcgctcct aattgatcag 420
ctgatcagat gatctgccgc c 441

<210> 2592
 <211> 428
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-051-Q1-E1-A12

 <400> 2592

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 acctcctgct ggtgccaggg cggggagggc gtcgcggagg tggcgcgcat ggggctcgcc 180
 ggggacgggt cggcggacac cgcccacctc agtaataatg aaaatgggcg gttcatttat 240
 ggagttgcga gttctcctgg taaaagagca tcgatggagg acttctatga ggcaagaata 300
 gacgacgttg atggagagaa aattggaatg ttcggtgtat atgatgggtca tggaggagtc 360
 cgagcagctg agtatgttaa gcagcacctt ttcagcaatt taatcaaaca cccaaagtcc 420
 atcactga 428

<210> 2593
 <211> 422
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-051-Q1-E1-A2

 <400> 2593

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 ctgctaataca ctatcagcac atcaagtcaa ccaagcctgt tgtagatcta ctaatattgg 180
 agtgtttctt tgcttaaaat gtggagatgt tcatagggca cttggacctg acatttcaaa 240
 ggttttatct gtaactttgg atgattgggtc tgacagtgat atcgactcca tggttgaggt 300
 tggtggaac tcatatgcaa attcaattta tgaggctttt cttccaaaag atcacccaaa 360
 acccaaacca gattcaacga tggaatatag gacgaaattt ataagagcta agtatgagac 420
 ac 422

<210> 2594
 <211> 390
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-051-Q1-E1-A3

<400> 2594

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ccgcatccag gaccacatca tgaagctggg ggagatggag gggtcncaca ccatgcagaa 180
cgactacgac tcgctggacc tccacatcgg gcagtgcctg tcgttcctgg tgaccgcgga 240
ccagaagccc ggcgactacc tgctgggtggc gtccacccgg ttcacaaagg agaagagcag 300
caccacggcc gtgatccgct acaagggttc cagcgccccg ccgccggcca agctgcgga 360
gggccccagc ggggtgggct ggtccatcaa 390
  
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<210> 2595
 <211> 383
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A4

<400> 2595

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ggcgccgagc gtgatctccg tccgtgccgc catggcctcg caccgggcgc tgctgctgca 180
gctcctcgcc gcagcgctcg tcgctgcgct ggcctctgtc gcatccgcgc acgacgcaa 240
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caagccggcc tctgacgatg acgccgtcga cgacgacgat gacgccgcc ctgtcggcgc 360
gcccacggg gccaccatga ctg 383
  
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<210> 2596
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A5

<400> 2596

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gctcgcctcg aatactccgc accaatccgt gtcggaccgg tacgtgtgcg agatctgcgg 180
gcaggggttc cagcgcgacc agaacctgca gatgcaccgg cggcggcaca aggtgccgtg 240
gaagctgctg aagcgggagg ccggggaggc ggcgcggaag cgcgtgttcc tgtgcccgga 300
gccgagctgc ctgcaccacg acccctcgca cgcgctgggc gacctcgtcg gcatcaagaa 360
gcacttccgc cgcaagcaca g 381

<210> 2597

<211> 361

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A6

<400> 2597

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atggtcaagg ctgggttcgc tggcgacgac gccccgaggg ccgtcttccc cagcatcgtg 180
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gacgaggcgc agtccaagag gggatatctg accctcaagt accccatcga gcacgggcatc 300
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<210> 2598

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A7

<400> 2598

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ctccggcgac caccggcctc cctctccgtc ctctagcgac cgaccaacgc gccgagcgaa 120
gatgtcgtgg cagacgtacg tggacgagca cctgatgtgc gagatcgagg gccaccacct 180
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cgagttcaag cccgaggaga tgggtgccat catgaaggat ttcgacgagc cggggcacct 300
cgccccgacc ggctgatac tgggaggcac caagtacatg gtcaccaag gcgaacctgg 360
agctgtcatc cgtggcaaga agggatcggg ggcatcac 398

<210> 2599
<211> 402
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A8

<400> 2599
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tgaaaaaagt tgtttgtgaa ttgtaaactg tggaaaaagt tgttgtgggc tgtgagctgt 120
taaaaaacta caaatgtttt ggtggaaact actaaaagtc gttaaaagtt cttcgatata 180
tgttttcaca gttccatcta aaagcaggta cataggtgct ttgagggtcaa agtgggttga 240
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gggttttacc tcgtccctac gtgaatctca tccaaacact attggaattg tggccgcct 360
attccatccc tccatataca tccaacaaa cattattgtg tc 402

<210> 2600
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G2

<400> 2600
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tcgattccgg cgacgacctt cgccgtcatc ttatccgtcc tcttctgtgc cgcggctggc 180
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tgccgcgcgc ggttcgtgac caatgtcacc gagtacatcg cgggcgcca ggtgaggctg 300
gagtgaagc acttcggcac cggcaagctc gagcgctcca tcgacggggt gaccgacggg 360
aacggcacgt acacgatcga gctcaaggac agcc 394

<210> 2601
<211> 377
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-G3

<400> 2601

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tgctgcccgc tgacttctcg gcttggccgc ggggacacg cccacggcat cgcgatggct 180
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gttgattttc tcgtgcgatg gacacgacac ggtgttgacg acgacacggt gttgacgtgg 360
ccggcgccgt tgacgcg 377

<210> 2602
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H12

<400> 2602

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cccatccagt acatcgattc tcccccaag atcaaaggcc ggaggaggaa gaaagggttag 180
ggagtcggcc atgggatgct tttcatgctg ctgtgtggca gatgacgaca acgttggcag 240
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tagccggttc ccagcccaa cccctgtcat ctccactggc agagctcagc caattgcagt 360
accggccatt catctggaag agctgaagga aattacaaa aacttcagca gtgatgcct 420

<210> 2603
 <211> 303
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H3

<400> 2603

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 atctcagtcg tgctgcgagt gcacctggac atgctggcaa tgtgtgcagc gttatgacgt 180
 acgacgagct attgatctga catcgacagc atgtcggcaa gtcaagtga gaacacccca 240
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 gtc 303

<210> 2604
 <211> 81
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H5

<400> 2604

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<210> 2605
 <211> 71
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-035-Q1-E1-H7

<400> 2605

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 caaaaagata a 71

<210> 2606

<211> 450
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-035-Q1-E1-H8

 <400> 2606

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 cccgcgcaag gactgcgacc angtgcangc ggacagggac cgcgcccgcg tcctgctcac 420
 caggaacgtc ggcacagcg acaacctgcg 450

<210> 2607
 <211> 426
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-A10

 <400> 2607

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 agaatgctgc ctacatcggc acccctggca agggatcct tgcctgctgat gagtcaactg 180
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 ccgaca 426

<210> 2608
 <211> 407

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-036-Q1-E1-A11

 <400> 2608

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 aggacggcng cggcaaaaag aagccccacg tcaaccacgg caagtttaag gcggagccgt 180
 ggacggacgg gcacgcgacg tactacggcg ggcgcgacgg gttaactgac accacggaca 240
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 tgggcccgtc gctgtacacc aacggcaccc ggtgccgcgc gtgctacgag ctcaagggcc 360
 ccaagggcac cgtggtggtg acggccacca acgaagcccc gccgccg 407

<210> 2609
 <211> 222
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-A12

 <400> 2609

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 tgttacttcg tcgctatacc ggtctcagca gctgctaata taactgtcat gctgggctagg 180
 aacctgtggc ttcgatctca taatttttct gtcacttatg ag 222

<210> 2610
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-A2

 <400> 2610

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ccagaggcgg ccgtcgccga gcccgatcac aaggaggagg aagccgtgga gaagaccgtc 180
gtcgaggagg agaagccagc ggcagccgcc aatgcagagg aaaaggtcgc caccgccgcc 240
gagaccacga cgacggtgga ggcgaagaag aaggacgtcg aggaggccag gaaggagaag 300
caggcgcagc aaagctgacc gactgtccgt gcatgcgcgt gccaaactaat ataattattg 360
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c 421

<210> 2611
<211> 408
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-036-Q1-E1-A4
<400> 2611

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gtcgtggcag gcgtacgtgg acgagcacct gatgtgcgag atcgagggcc accacctcgc 180
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gttcaagacc gaggacatgg ccaacatcat gaaggacttc gacgagccag ggcacctcgc 300
gccgacaggc ctgttcctcg gacctaccaa gtacatggtc atccaaggcg agcctggtgc 360
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<210> 2612
<211> 432
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-036-Q1-E1-A8
<400> 2612

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ttcttcacc tcaacatctt cgagtgaag aacgtgctga tcgacaaagt tacggtcaag 180

gcccccggcg acagcccca caccgacggc atccacatcg gcgactccag caacgtgacc 240
 atcagcagca ccaccatcgg cgtcggcgac gactgcatct ccacggccc cgggagcaag 300
 atgatccgca tccatggcgt caagtgcggc ccaggccacg gcatcagcgt cggcagcctg 360
 nggcgctaca aggacgagaa ggacgtggaa gacgtgcagg tgacgggggtg caccatcgcc 420
 gggcacacga ac 432

<210> 2613
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B12

<400> 2613

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 gaagctccgc ggcaacgatg acatctccaa gtggaggcag ctgtggccaa cagacgtcct 120
 ggagtaagca tgaaccgat cctttctcac accgacattg atccatcgct caaatgacac 180
 gcctttcttt catcatcata ttgaccacat tcgtcgtctc tgcgcgctg ttgtaaacgg 240
 gttagtagaa gaacaaatcc cgtagctgga caagggtgta acacttactc tctccgtttc 300
 gttttagttg tcgctggaca gtgcaaaatt gacctatcca gctacaacta agaagaaacg 360
 gatggagtaa ttgttaggcg tacaaggcgc agactgcttc ccacttgctc gtggggc 417

<210> 2614
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B4

<400> 2614

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 tgggcgcctc cggcaatgtc aagacagaca gcacgaaggc tgtgcatgac gcatgggcat 120
 cggcgtgcgg cggcactggg aatcagacaa tcctcatacc caaaggtgac ttccttgctc 180
 gacaactcaa cttcacaggc ccttgcaaag gcgacgtgac catccaagtg gatggcaatc 240
 tgctggcgac caccgaccta agccagtaca atgaacatgg taattggatc gagattctac 300

gcctggataa cctggtcatc accggcaagg gaaaccttga cgggcacggc ccagccgtgt 360
 ggagcaagaa ctctgcacc aagaagtatg actgcaagat ccttccaac t 411

<210> 2615
 <211> 397
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B5

<400> 2615

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 tggctaggac catgtcgacc agcttcaagg agccaccttg tgtcgccgaa cacctccctc 180
 tctctggccc cgtgcagctc gcggcgctga cgggtttctc ctgggccaag aagccccggc 240
 ccgacgccac gacggccgcg gtaactgtga tgatgcgcga ccggctccat gtggccaggg 300
 accatcaggt acaacatcag cggatgagga gacggagcat gaaccatctc cggctccggc 360
 gccaccacca ccgccacatc agcggcggca tcatacg 397

<210> 2616
 <211> 437
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-B8

<400> 2616

cgcgggtcga cacacgcgtc caccacgcg tctgtaaaaa tcacatttta aagcagtaaa 60
 ttaattcaaa tgaaaaagtt ttcaactaca aatttgtata actcatcatg atgtacattt 120
 tatattttga atattttctc atatgataaa ctaaaaataa atttgttcat aaaacctata 180
 tctctctcat agtttatgta actacgagag atatgtataa aatttgtgca tattgttaga 240
 actatcatgt gagatgaata aatgatcaaa caaccaaatt aaactttata gatcttgaaa 300
 agttatagaa gtttgtagtt gacaactttt tcatttgaag tcatatgtgc aacgaaaact 360
 atgcctgaat ttaaaaaatt taaaatttga attttgaaaa caacctcgaa agaaaaaacc 420
 accaacatga aagttgt 437

<210> 2617
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C1

<400> 2617

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 gtgccgggac tccgtggttt tgggcatctg cttcgtctct ggtcgatctg cttcatatac 120
 ttctagatct gcgccatctc cgttgctacg accttgacct caagaagttt gatgaggact 180
 tcaatatact aaactggtgg catgaacata agttgtccta tcctattcta tctatcttag 240
 ctagagatgt tatttctgtt cctgtctcaa caatttcctc agaatctgca tttagccttt 300
 gtggcaggat aattgaggaa cgacgacgct gcctagcacc agaaatggta gagatgttac 360
 tttgcatgaa agattgggaa ctaagagaag caagagggca acactctaca ca 412

<210> 2618
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C11

<400> 2618

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 agtccgggct cgatcatccag aactgccgcc tgggtgccga ccagaagctg ttcccgacc 120
 gttcaagat cccctcgtac ctgggccgcc cctggaagga gttctcgcgc ctcgatcatca 180
 tggagagcac catgccgac ttcgtcaagc cagaggggta catgccctgg aacggcgact 240
 tcgccctcaa gacgctctac tacgccgagt acaacaaccg cgggcccggc gccggcacca 300
 gcaagagggg caactggccc ggcttccacg tcatcggacg gaaggaggcc gagccgttca 360
 ccgccggggc gttcatcgac ggcgccatgt ggctcaagta caccggcgcg ccgcacatac 420
 ttggtttcaa gttctaaag 439

<210> 2619
 <211> 441
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C2

<400> 2619

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aaggtgaaag ctagcagaag aggtacctaa ctctacccta ctatagagaa aaagtcagca 120

cattgcaagc aataataatg gagacgacga cgaagctccg gtggagccgg cccggctcct 180

tcctcctcgt cgccgcggcg ttcttggcgt ccgccgccgc gtcgggcgctc aacgtcggcc 240

agttcgacga ccacttgcag aagcggaagg agctcgccga ggcgtcggcg agggaggcgt 300

acaggcccga cccgtacaac gtcaccaaca gcttcaacgc cgccgtccac agagctgtca 360

gcagcagtcg gcgtgagatg cgggagaggc cgaggaagca caagaagaag ggcccgttcc 420

ggggcgacga aacctatcga c 441

<210> 2620

<211> 206

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C3

<400> 2620

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ccgtgggtctt cgccgccgag gccccggcgc ccgccccag cagcacctcc tcggccgcgt 120

tcccgggggt cagcgccttg ctgggcgcct cgggtgctctc cttcatcgcc gagtaggtgc 180

agtagaatta aaggaggatc ggaagg 206

<210> 2621

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C5

<400> 2621

actcgcggtt cgaccacgc gtccaccac gcgtccgagc tcgggcgcac gtcgggcag 60

ggcaccttcg ccaaggtgta ccacggccgg aacctcgcgt ccggcgagag cgtggccatc 120

aaggatcatcg acaaggagaa ggtgatgcgc gtcggcatga tgcaccagat caagcgcgag 180
atctccgtca tgcgcctcgt ccgccacccc aacgtcgtgc agctgcacga ggtgatggcc 240
agcaagagca agatatactt cgccatggag tacgtccggg gcggcgagct ctccgcccgc 300
gtcgcgccgc gccgggtcaa ggaggacgcc gcgagaaggt acttccacca gctcgtcggc 360
gccgtcgact tctgccacag ccggggcgtc taccaccgc 399

<210> 2622
<211> 200
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C7

<400> 2622

ctcgcgggtc gacacacgcg tctacacaca cgttctggca agcgggtggt acggcgtggc 60
catgagtcag ttagagagcg agcttgtgat ggggagagtt cttttgttgg acggagagtt 120
caaaatccaa aaatcttggg gtatgtacag ttgtctatga ggaataactaa cacgtcttgc 180
agtgttctg cctctcaaaa 200

<210> 2623
<211> 453
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-C8

<400> 2623

actcgcgggt cgaccacgc gtctaggatg cctcgcacga agtgtccgat cctgcctaac 60
accaacttca cgtacaagtg gcagcccaag gaccagatcg gcagcttctt ctacttcccg 120
tccatcggca tgcagcgggc ggcgggcggc tacggggcca tcagcgtggt cagccgcctc 180
ctcatcccgg tcccgttcga ccagcccccg ccggagaacg accacgtggt gctcatcgga 240
gactggtaca ccaaggacca cgaggtgcta gcccgccaga tcgacgccgg caagggcgtg 300
ggccgccccg cgggcgtgct catcaacggc aagggcggca aggacctgga ggccgcgcct 360
gccttcacct tcgaggccgg caagacgtac cgcctccgcg tctgcaacac cgggatcaag 420
gcgtcgtca acttccgcat ccagggccac tac 453

<210> 2624
 <211> 406
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-036-Q1-E1-D1

<400> 2624

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gccacgatcc ctccaaggcg gacaagggat tccacggagg agggtaacctg gccgccggtg  120
gatactacgg cggccattac cccggcggcg gctaccctgc tccaccgggc ggcgggtgcgt  180
accctcccgg gcctgggtac ccggtaccac ctggtgggta cccgcctccg ggtggctacc  240
ctcagcctgg cggatacctg ccgtcgcaca gggcgtaacc ggcgcggggg gcaggcgcgt  300
atcctcccag cgggtacccc catcaaccgg tctaccaca gcctggctat ccatcgatgc  360
ccggtcattg tggcatgtac cgaagaggcc acggtgcang gggctc                    406
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<210> 2625
 <211> 378
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D10

<400> 2625

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gtcgatgcac gcctctaaag tgagtcgtat tataagaaaa caaagcaaaa aaaaaaata   60
aaaaataaaa aaaatcaaaa aaaaacagag acaaacaaaa acagtttaac gcataacaaa  120
cacataaaac ggggcaagga aaaccacaaa cattgtaaac caaatctaca tcaaaaaagg  180
ggggggccctc ccaaagggtta tcgcgctaga tccccctgct tcacaactta agccctcttc  240
caaggtcccc ccaatttaca tttccggggg ctttttttaa acaccttgcc cgggaaaacc  300
ccgggctttt ccaaaattaa tgcctttaa aaaaaccccc ctttctccac ggggtatttt  360
acgaaaaggg gccccctc                    378
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<210> 2626
 <211> 447
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D2

<400> 2626

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ggtgccacaa cctctcctgc tgctcgtgct ggtcgccgtg ctagcggtgg ccgccgatgt 120
cgccaacgcc ggccacgcca agcccctaac gcctggcggg cgcgtggtac acgacaacca 180
cggcaagttc acggccgggc cgtggaaacc cgcccacgca accttctacg gcgggcgtga 240
cgggtccggc accacggcgg gcgcgtgcgg gtacaaggac acgcgcacgc aggggtacgg 300
cgtgcagacg gtggccgtga gactgtgct gttcggtgac ggcgcggcct gcggagggtg 360
ctacgaggtg cgggtcgtgg acagccctag cgggtgcaag cccgacgcgg cagcgtggt 420
ggtgacggtg accgacctgt gcccggc 447

<210> 2627

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D5

<400> 2627

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cggcctcgag gccggcgacg acgcaggcgc gaggcgccgg agggtcgggc catgacgtcg 120
tccgtgcggc agtgggtggc ccgcgccgcc gctgcgtca aggacaggag gagcctgctc 180
ctggcgcgcc tgccccgcg ccgggccggg tcgtcgtcgt ggcaccaccg ggagctggag 240
gcggccgtga tccgcgcgac gagccacgag gaccggtgga tggactaccg gagcgccgcg 300
cgggtgttcg cgtgggcgcg ctgctcgccc acgttcatcc ggcccgtcat gtgggcgctg 360
gcgcgccgcg cgcggcggac gcggtgctgg gtcgtggcgc tcaagtcgct catgatcgcg 420
ca 422

<210> 2628

<211> 462

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D6

<400> 2628

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cgagtgaag aacgtgctga tcgacaaagt tacggtcaag gccccggcg acagcccaa 120
cacggacggc atccacatcg gcgactccag caacgtgacc atcagcagca ccaccatcg 180
cgtcggcgac gactgcatct ccatcggccc cgggagcaag atgatccgca tccatggcgt 240
caagtgcggc ccaggccacg gcatcagcgt cggcagcctg gggcgctaca aggacgagaa 300
ggacgtggaa gacgtgcagg tgacgggggtg cacgatcgcc ggcaccacga acggcctgcg 360
catcaagtcg tacgaggact ccaagtcgtc gtcgaaggcc agcaagttcc tgtacgaggg 420
catcaccatg gacaatgtct cctaccccat catcatcgac ca 462

<210> 2629

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-D8

<400> 2629

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ttgcactctt aagaagacga tggtcggcgt ccgcatcaag gcgtagcagg acgccgcctc 120
cgtgtcacc gtctccaaga tccactacga gaatatcaag atggaggact cagccaaccc 180
catcttcacg gacatgaagt actgccccaa caagttgtgt actgccaacg gcgcctccaa 240
ggtcaccgtc aaggacgtca ctttcaagaa catcacggc acctcctcca ccccgaggc 300
cgtagcctg ctctgcactg ccaaggtccc atgcaccggc gtcaccatgg atgacgtcaa 360
cgtcgagtat agcggcacca acaacaagac catggctata tgcacgaacg ccaagggcag 420
caccaagggt tgcctca 437

<210> 2630

<211> 411

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-036-Q1-E1-D9

<400> 2630

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caacctgtgc acaggacggc ggggaagcac gccacaagt acaaggtggt ggacgcggtg 120

acggtgctag agatgcangt ggacgcgttc aagaagcgcg tgaaggcggc gcggaggctc 180

gccaaggagg aggtcaagac ggccgcgacg cccgaagcgc ggagggcgct gaacctctgc 240

aagacctact acctggacgc cgccgacaac ctcggcgcct gcaagcgcgc catcggttc 300

cgcgacgccg tcaccatccg cgccacgatg agcatggtgg cgcaagacac gcagaactgc 360

gacgaagagt tcaagaange cgtctccaag aaccccatgg aggaccacaa c 411

<210> 2631

<211> 261

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E1

<400> 2631

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catggctgcg cgcattccga tgcgtgggca tgttttttga ttcgacacac cttttgtcct 120

ctttttcttt gttccctctt tctccttaat ttaacgaatt gatgcatgcc gctgatgttc 180

ttcccttgag agagggatta acatttgtat catttcatcg cttgccattt gtttgaatcc 240

attcaacaat tcattcaaaa a 261

<210> 2632

<211> 337

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E10

<400> 2632

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actaataaaa ctgcgacgcg cgccatccga gagaacaagc caaccgaccc cgtccccaag 120

gcaatccgtc gccgacgtac caccgccacc gcaggagcga gatggagatg aagaggatcc 180

tcttcgccgt cctcgtcgtc atcgccgcct cagacaccgc agtgctggcc tccaccgagg 240

ccgccgccgc cggcgcccca actgcctccg agtcgtccgc caaggctccc gctggcacgg 300
gtccccggcg cgccgctggc gccgccaccg cagggcc 337

<210> 2633
<211> 379
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E12

<400> 2633

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agccatgggt gcctgtgcaa cgaagcctaa gacgcttgag gggaaagccc cagctgaggg 120
caccatctcc acacccaagg ttgcacctga gaccactacc atccacattg aggttgccggc 180
aaaacatgca gtagttgaga aggtggagga ggacaaggag gaggcactaa cagtggcggc 240
gaaacaagag ccagcagcca ccattgagcc tcagcagatt gctagtgagg tgaccacttc 300
ggaagtggcg gtcgtcgttg tcgagcctga gaacaaagag gaggaggaag ttgtggagaa 360
gaccgtcatc caaaaggag 379

<210> 2634
<211> 447
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-E4

<400> 2634

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gcaaggtttc tttgcgagtg gccggagaag atgatgggcg ggttcctctc cagggtcctc 180
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aaaccacaga ttgagcagct catatcttgg tgtcagtatt ggattttagt tgccctgttg 300
acagtcttgg agagatttgg agattttaca atatcatggc taccgtttta ctcagaagca 360
aaggtgttgt tctttgtata tttgtgttac cctaagacaa agggaactac gtatgtttat 420
ggaactttct ttaagccata tatttct 447

<210> 2635
 <211> 438
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-E5

 <400> 2635

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 tggcggggcg gtggtacacc acaaccacgg caagttcacg gccggggcgt ggaaaccgcg 180
 ccacgcgacc ttctacggcg ggcgggacgg gtccggcacc acggcggggc cgtgcgggta 240
 caaggacacg gcgcgcgagg ggtatggcgt gcagacggtg gccgtgagca cggtgctgtt 300
 cggcgacggc gcggcctgcg gcgggtgcta cgaggtgcgc tgcgtggaca gcccagcgg 360
 gtgcaagccc agcgcggcgg cgctggtggt gacggcgacc gacctgtgcc cgcccaacga 420
 acagcaatcc gcggacag 438

<210> 2636
 <211> 444
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-E8

 <400> 2636

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 tggcggagat ctgcatgaag actccgtccc ccgacctgtg caccaggacg gcggggaagc 180
 acgccaacaa gtacaaggtg gtggacgcgg tgacggtgct agagatgcag gtggacgcgt 240
 tcaagaagcg cgtgaaggcg gcgcggaggc tcgccaagga ggaggtcaag acggccgcga 300
 cgcccgaggc gcggagggcg ctgaacctct gcaagaccta ctacctggac gccgccgaca 360
 acctcggcgc ctgcaagcgc gccatcggct tccgcgacgc cgttcacatc cgcgccacga 420
 tgagcatggt ggcgcaggac acgc 444

<210> 2637

<211> 425
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-036-Q1-E1-E9

 <400> 2637

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cctggtgtcg gcaaatagacc tcaagaaagt gtcgctcttc tcccggaactc gcatctacgc 180
cgtggcttcc atctccggat tcgacctccg catcccttcc cacagcacc c aagcagacca 240
cagcaacggc tgcaacctcc gctggaacgc cgtggtacac ttcccatcc cggctgccgc 300
tgacaccgc ggcttcgcac tccacgtgag gtcgccgcc cagcgtctat acctgngcga 360
tcgcgacatc ggcgaggtgt ttgtgccc atcgacacctc ctggccggcg ccgacaagg 420
tggcg 425
  
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<210> 2638
 <211> 295
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-F1

 <400> 2638

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ctttttcttt gttccctcat tctcctta attaacgaatt gatgcatgcc gctgatgttc 180
ttcccctgag agagggatta acacttgat catttcatcg cttgccattt gtttgaatcc 240
attcaacaat tcagtcaaga aaaaagtaaa caaaaagggc ggccgctcta gagga 295
  
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<210> 2639
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-F2

 <400> 2639

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 ctctctgctg cctccgccac cgtggctttc gccgcggagg ccccggcagc ctcgccgaag 180
 cattcggcct ccacgccgtc aaaggcgccc agcagttcgc ccgacaagtc cgagaaggcc 240
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 gcggcggcct ccaagtcaga ggcacgcct tccgaggcgc ccgactccgg gtccagcgct 360
 gcgtcaccta ctagcgagag cgccgcgtca gagaaggccc ccgcccgtgc cccaaggac 420
 tcgtcggcca gcccttcgc g 441

<210> 2640
 <211> 411
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-036-Q1-E1-G1
 <400> 2640

gtcgatacaa caccctacag tgagtcgtgt taaggagacg gagcaagaac cacctccggc 60
 tccggcgcca ccgccaccgc cacagcagcg gcggcaccat acgaggcgga gaagcaggag 120
 gtgatcaagc agtgggcaca ggtcgtgac gccttcagcg cctctgaagc ttacaacagc 180
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 gtgaacaggg tggacttctc agggccgctg ctgtcgcagc cccggcgcat cgacgagctc 300
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 accgaggang aggagcactg atggcagaga cacggcatgg acacaactaa a 411

<210> 2641
 <211> 403
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-036-Q1-E1-G3
 <400> 2641

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tactgagcta gccttcagaa aaaaaagaaa agaaagagat tgagaagcag ggagaaaaaa 120
 tggcactggc ccattgagga agcttgagaa ccagttaaca agaattgcc aacatattctt 180
 ggacaatctt gttacacagag ttttaagggt tcccagcaga gaagagcgcg tgcaaccacc 240
 acattcatat aattaataag caagggttag agaagaggca acatgggcac aaagatgaag 300
 aaggggatcc tgaagccgtt ccgctatata tcaaccatca tggatggtaa ggaggctgaa 360
 atgcaaattg gggtcccgac ggatgtaaaa cacgtggcac ata 403

<210> 2642
 <211> 453
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G4

<400> 2642
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 ctcttcacg ctgacggcca aggctgctgc ggaggacgac gatgaccct tcgaggagct 180
 gtacctggtg aagtggacgt cgctcttcac cccaccgttg gcagtgatcg gtatcaacat 240
 cattgcgctc gtagtcggtg tgtcccgcg cgtgtacgag gagatcccg agtacagcaa 300
 gcttctgggc ggccgggttct tcagcttctg ggtgctggcg cactactacc cgttcgccaa 360
 ggggctcatg ggtcgccgag gacgcacgcc gaccctcgtc tacgtctggg cgggacttat 420
 ctccatcacc gtctccctgc tttggatcac atc 453

<210> 2643
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G5

<400> 2643
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 ggcggcggag gcggaggcga aggcgaaggc tgtgggaggg gcgccgtcgg tgcccgtgg 180

ctcgctggac atcgcgcagc tgggcgcca gggcgacggc aagtcggaca gcaccccgat 240
 ggtgctcaag gcgtggaagc acgcgtgcga ggcgacgggg cagcagaaga tcgtcatccc 300
 caagggcaac tacctgacgg gcgcgtgga cctgggtggc ccctgcaagt cctccatcat 360
 catccgcctc gacggcaacc tgctcggcac cggcgacctc aacgcgtaca agaggaactg 420
 g 421

<210> 2644
 <211> 444
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G6

<400> 2644

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 cgtcgcacgc tccctagggg tccgcagggc cggggatcgc cggagatgga ctggagcgcg 180
 gtgacggcgg aggacttggg ggacgcgctg cgggaggtgg actggtccat gccgccgcgg 240
 cctgtcccgg agttcttctc ccgttcacc gtcccacgt cctactccaa gtggaccagc 300
 cgcctcaagt gcaacctcta ctactacagg acaaactatt tcattctgat catgttcac 360
 cttgggatgg gcttcttttg gaagccagtt gctatagttg ctgcttttat gactggactt 420
 agcatcgcat ttctcaatga tagt 444

<210> 2645
 <211> 216
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-G7

<400> 2645

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 ctccttctcc atcttcttca tctccatata tagctagagt gagacttcgc tgttgtttaa 180
 aagagaagag ttaagaaatg gattgacaag ttatat 216

<210> 2646
 <211> 439
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-G8

 <400> 2646

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 ggcccggcca ccaaaaccaa tcagcgtcac aaagccgggg ggcgatagct caagcgccgc 120
 tagcgagttg cgcaccggga gccgtcggcg gtataccgct ctctgtgccg gatcaacaaa 180
 gccacaggtc cgattatctc ctttcgtgac ttagccaacg ttgcgccgga tagatcagta 240
 ctgctaatacg ctaacaacac atcaactcaa ctaagcctgt tgtacgcata gcaagaaaat 300
 tgacggatct catcatagac agtgacagta ggatatgtgc tgactgtggg gcacctgata 360
 ccaaatgggc atctggtaat attggagtgt ttctttgctt aaaatgtgga gatgttcata 420
 gggcaattgg acctgacag 439

<210> 2647
 <211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-036-Q1-E1-H1

 <400> 2647

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 tttctctccc ggacgtcgat cgtgttcttc agcacgggct agctagctcc ctccctccca 120
 gccatggcga cgccggacaa caaggggcac gggcatccgc tgcccaagtt tggggagtg 180
 gacgtgaaga atccggccac gtccgagggc ttcaccgtca tattccagaa ggcccgcgac 240
 gacaagaaga ccaccaccgg ccctggggct gggaacgcgc gcgcaggcat tccgccggcc 300
 ttcaggaacg gcggcgcgga cggcgggtac agggccgact tcggcgacgg caaccagtac 360
 acgccgcca aacggaagaa gtgggccttc tg 392

<210> 2648
 <211> 391
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H10

<400> 2648

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ggcttccccg gttcttgaga ggggaaatag gaggcggagc cgaggagagg gatggggagg 180

gacgagaggt tcccagtgtg ggaggccgag ctcggcgctg gggtcgcccgc cgccttcgcc 240

gctgggctcg tcggcgtgta cctttccatg ccggactccg actacagctt cctcaagctg 300

ccacgtaatc tccaggaact ccaaactctc actggccatc gtgagaacta tactagcgac 360

tacaccctac aggtgtttgt atgctactgc g 391

<210> 2649

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H5

<400> 2649

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taacttgtaa tctgcaggat ctaagcaaag acttgattta gttatggacg gattggtagg 180

cctcttgaaa gttcgcgtgg tccgggtat caaccttgcc taccgagacg caagaggcag 240

cgatccgtat gtcgtcctac ggcttgcaa gaagaaactg aagacaagcg tgaagaagag 300

atccgtgaac cccatatggc aagaggagct aactctgacc gtcacagatc ccagccaacc 360

actgaagctg gtgagtgagc 380

<210> 2650

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H6

<400> 2650

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caccgggcgc ccaggtcttc cgctgcgcag ctgggcaaga tcgcgcgct ggccgtgggg 180
cacatgctgg gcacggtgtt caccaacatg agcctgggca aggtcgcgct ctcttcacg 240
cacaccatca aggcctccga gcccttcttc accgtcgtcc tctccgcct cttcctcggc 300
gaggttcttc ccttccggg gctgggctcg ctcggtccga tcgttgggcg cgtcgccttg 360
gcgtcattca ccgaagtttc tttcaactgg accgggtttt ggagcgccat ggcgccaat 420
cctgacaacc aat 433

<210> 2651
<211> 310
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G1

<400> 2651

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tagcacctca aggtcctagg ttcgatcccc tcgggggcga atttctggct tgggtaaaaa 120
aaattcctcg ttgtgtcctg tccggcatcc gctcccgggt tacgtcctgc gtgcaccctt 180
cgggtgggct gtttgagagt tagcggttac ggccagggtt cggggatttt ctgcaccggg 240
atcatgtttc ggtctcttct taatataata tcgagagggc ggtctttccc tcccctgtcg 300
agttttctgt 310

<210> 2652
<211> 221
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G11

<400> 2652

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cgaccgccac atctattagg tgcagccatg ggtgcctgtg caacgaagcc taagacgctt 120
gaggggaaag cccagctga ggccaccatc tccacacca aggttgcacc tgagaccact 180

accatccaca ttgaggttgc ggcaaaacat gcagtagttg g 221

<210> 2653
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G2

<400> 2653

gggtcgaccc acgcgtccgc ggtggtccac catggcgag cgagcgggtg ccacgatgac 60
gactaataag cccctcctcc tctcgcctt ggcgtccgcg ctccttggtg cggcgccggc 120
cgccgcgaac gcgcccggcg gggcgttcag caactgggtg gcgatgaacc agcagagcta 180
cgcgctgtac gcgcagaagt ccgtcgggga cgggggcaag gagcccctgg acaagaagct 240
gtcggaggcg gagaagaaga acgtcacgta cgtggtggac cccatcggca agggcgacta 300
caccatcatc accgcggcgc tcgaggatct cgcggtgagc aacaccaatc gcgtgatact 360
ggatctcaag cccggagctc acttgcgcca gaaactgatc ctgaagatca agaca 415

<210> 2654
<211> 345
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-042-Q1-E1-G3

<400> 2654

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gaccggcaag actatcacc cgcggtgga gtctcagac accatcgaca acgtcaaagg 120
caagattcag gacaaggang gcaatcccc aagaccagca gcgggtcaat ccttgccgga 180
aaacaacttg aagaacggcg caagccttcc gactacaaca tccaaaagga gaacaacctc 240
cacttggtgc tgcgcctcaa gggaagcatg cagatcttcg ctaagaccct gaccggcaaa 300
actatcacc tccaagtgga gtcttcaaac accatcgaca atgtc 345

<210> 2655
<211> 423
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-042-Q1-E1-G5

<400> 2655

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tcacggcgcc cgcggacgtc gagaacacgg acggcgcca tgctggcggg tcctccaatg 120
tacgcatcac caactcgacc attggcaccg gcgacgactg cgtctccatc ggccccggga 180
gcgacggtgt catggtgaac aacatcacct gtggccccgg gcagggcatc agtgtgggct 240
gcctaggccg ctacaaggat gagaaggacg tgagcgacgt gacggtgcgg gattgctgctc 300
ttaggaacac caccaacggc gtgcgcatca agtcgtacga ggatgccgag tctgtgctca 360
cggcgctnca tctcaccttc gagaacatca ggatgganga ggtggccaan cccatcatca 420
tcg 423

<210> 2656
<211> 284
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G8

<400> 2656

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acgacgatcg atatgtaata gcacgtcgtc gacgaccgac cgcagtcgtc gcagactggc 120
tggcactaaa ccacaaatcc tcttcacctg gattacaaat atgtaactga gaaaggaaag 180
gaaaacaaaa atgtaactgc gtgacaatag caagaatcca gcactcagaa tttggtacag 240
ccacgcagtt acaaattctg agtgctggat tcttgcatt gtca 284

<210> 2657
<211> 219
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-G9

<400> 2657

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atccttgtgt tcctcgcgt ggctcaccg gctgctctgg ccgccttcga tgtgatagag 120
atgctggccg acaagccac gtactccacg ttctgaagc tcctgcagga caccaaggtc 180
gcgggcgagg cgaatcagct ccggtcggcg acgctactg 219

<210> 2658
<211> 206
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H11

<400> 2658

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acgacctctt cgtccctctc ttcattaaca ggctaacttg taatcagcag gatctaagca 120
tagacttgat ttagttatgg acggattgga aggcctcttg aaagttcgcg tggtcggggg 180
tatcaacctt gcctatcgcg acgcaa 206

<210> 2659
<211> 109
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H2

<400> 2659

cctatagtga gtcgtattaa gtggctatcg tagaggttga tgcgtgaggg aggacgcgcc 60
atggaagtcg gtatgcgagc acggagtgga ggtggtaccc atgggggtgg 109

<210> 2660
<211> 419
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H3

<400> 2660

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gagcatgatg ttcagctccg gatcggagta cgactccggg gccaaactacg cggccaacat 120
cagcaagttc aggaaggtgg ccttcgagag cagcgagttc agcaacgact acagcgggac 180

aagcgagtac ggcgccgact ccggggacgc ggcgacccag cggcagcaac atcgctgacc 240
 tcctcggtccg agatgcgtgt gtgggtgtaca atatttatac caaggggtcg atgtcgactg 300
 tcggatacta tcagagatac ccaaccctcg atcgtgacag ctttagtaca tgtaatgatg 360
 ctcataaaat gtcattgtaac gtacgtatatt gtgtgtgaca tgttgctgct tgcttgact 419

<210> 2661

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H5

<400> 2661

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 ttgagaaatt gatgcgtaga ttgcgaggaa atttcagatg cacagatcaa tctgtgggag 180
 ttgccaacca acttcaacac cttgcgtcta ttattcaggt tcttgacccg aagctacatg 240
 accacctaga aactcttggg ggaggtgact acctttttgc gttccgatg ttcattggtgc 300
 tttttaggcg tgaagtatca tttggagact cttataacct ctgggagatg atgtgggctc 360
 tggaatacga ccctgacatt ttcttcgcag cgtgtgaaga acaagggtgca gtaaatt 416

<210> 2662

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H6

<400> 2662

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 ggagctcaca aagctacgcg tgctcaacct cagctacaac aggatttcgc ggattgggca 180
 tgggtctgtcg aactgcacgg ccatccggga gctgtacctg gcgggcaaca agatcagcga 240
 cgtggagggt ctgcaccggc tgctgaagct ggcgggtgctg gacctgagct tcaacaagat 300
 tacgacggcc aaggcgtg ggagcgtggt ggccaactac cactccctcc tggcgctcaa 360

cctcgttggc aaccccggtgc aggcccaacat cggcgacgac gccctgcgcc gggcggtcac 420
 gggcctcctc ccg 433

<210> 2663
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-042-Q1-E1-H7

<400> 2663

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 ggcgcctgtt gcggggggtg cgcgcgtgga tgtcgtggag ggcaggtcca tggcgtccgc 180
 cgacgcgcct gaggcggcgg ctgacgcgcc cgctcccggt cccgactccg cctcatcccc 240
 ggactcgtcg tcggaggcgc cctccagcag cagctcatcc gactagccgc gcacaacgca 300
 gttcttgtca tgatctatct agcaaataaa aagatcatat gtctcgtttg attctctgga 360
 ataactaata gtatatatgc tgcgcccggg tgatatataa atatgtgcat gaaa 414

<210> 2664
 <211> 403
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-A1

<400> 2664

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 gtcgcctcca gcgcaacggt gtcgactgct catgacgaga gctgctggaa ggacgacgac 180
 caccacccta tctgctttcc cgaagactgc gtggcgacct gccaggatca cggccacgcg 240
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 tgccaatagg cgcgaacagc tgcgtcgcgt ggcgtcctgg ctgcctcgcc ggccgatgaa 360
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<210> 2665
 <211> 396
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-A10

<400> 2665

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actagtagaa cgctgcgatg gcagcgtagg gaatcacggg tcaattccac aacgtcaatc 180
gccaccggga gganagccan gaccgcccac gcgctccgcy tgcagccgca ctagctgctg 240
tcacgcacg actacgtatc gctcgcgatg cgcgcggcta cacgtcaacg ggaaaggcaa 300
gaggtccttc atgtccagca tctacatgtg cctgttccca aaggatcatg actgagtgat 360
ccgaagatgg atattcacia tcgtcaccc gtatac 396
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<210> 2666
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A11

<400> 2666

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cggcaacctc cgcggccgtg gcggcgga gggccgatga cgccctgcgc cagcgcccg 180
gggggctcgt gcaggtccgg gagcgggacc agggcccgt gtcgacgggg caccagcacc 240
tgcaccacca tcaccaccag ctgcggcggt cggcggcggt cccacccgc cgccggggc 300
cggggcgccg cctctctcag cgctgcgaaa gcgacctcaa catcaggag caccgtcct 360
gcagcgaggt ggccggcggc accgcggcg gctgcgccgc tgtgtgctgc tgc 413
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<210> 2667
 <211> 426
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-043-Q1-E1-A12

<400> 2667

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tggtcccccga acgtgccgcc cggccccaac atcaccacca actacaacgg caaatggctc 180
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atcgct 426

<210> 2668
<211> 290
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A5

<400> 2668

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ccatggcggt cctgtggctc gagttctcgc agtcgttcca ggtgctggca atcctcgct 120
ccaagctcaa gcacgccgtc gcgctcggt acaagttctg ggtcggcgcg gggctcccc 180
ccaagggagc cgcccacgtc gcgctgcct gccagctggg cctcctccgg tgcaaactcg 240
cctgccaagt cggggtcctg ttgatgcaac ttggggccgt ccgggggggg 290

<210> 2669
<211> 329
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A7

<400> 2669

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tcgttaccat ttcaacatac acgaccattt tctacacaca actttgagtg aagatttatc 120

ggacacaggt ggtaatcgtc tgacatgtcc tgagatacac ggagactgat ggtgccaggc 180
tagtgggttg agtacaggat gagcgcaacc ggtagtgtgt atatcacgtt ctttgtactc 240
aagaattttg tacagacaga atgcggtgcg gatagcatgc cttgcataca taataatttc 300
aatacagggt gaaaacttga aatcaaac 329

<210> 2670
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-A8

<400> 2670

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gtcctcttct gcatcgtgca tgggtgagaag gaagagtcaa agggcatcga tgcgaaagcg 120
tccgggcctg gtgggtcctt cgacatcacc aagttgggcy cctccggcaa tggcaagaca 180
tacagcacga aggtctgtgca cgaggcatgg gcatcggcgt gcggcggcac tgggaagcat 240
acaatcctca taccgaaggc cgacttcctt gtcggacaac tcaacttcac atgcccttgc 300
aatggcgacg tgaccatcca ggtggatggc aatctgctgg cgaccacgga cctaagccag 360
tacaaggacc atggtaattg gatcgagatt ctacgcgtgg ataactggt catcaccggc 420
aagggaac 429

<210> 2671
<211> 310
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B10

<400> 2671

gggtcgacgc acgcgtccgc acacgacgtc cgatgatacc tgatgatcag tgtgtgatcg 60
agcaaggaga cgacacttga attctctaca gttggcatag cggcataggt cgggagagac 120
actctcgact ggccacacca tgtaacaaac taactttctt cgatgtctcc cattattttc 180
ctccacggag ttcttctgat gaaacaacat gttctaattg ggaaaaaaaa aaaaaaaaaa 240
aaaaagaaag aaacacaaaa agaacaacaa cttaaagtga agtaaatgaa aagggataaa 300

atcttacgat

310

<210> 2672
<211> 326
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B11

<400> 2672

cgggtcgacg cacgcgtccg aaaacaacca cgcctccatc acatcactgc cgccgcggtc 60
gctacagtcg ctgataagcc gctgcatcca cggatggaga tgaacaggat cccccacaca 120
gtctctctct gctctgcac attcacttac acctctgcgc tagcgcaatc tctgaccaga 180
tgatcgctcg cgtctttaca cgccatcgcc ggggaaaacg ttggcgttat cctcgcggaag 240
cacattcact taaccccccg attaagaacc ggagccagaa ggaagaaagc caggtccggg 300
gacacatctc actactctgc gctgct 326

<210> 2673
<211> 373
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B12

<400> 2673

gggtcgacgc acgcgtccga acacgcgtcc ggagcaagaa ctctgcacc aagaagtacg 60
actgcaagat ccttcccaac tcgctgggtga tggacttcgt gaacaacggg gaggtgtccg 120
gggtcacgct gctcaactcc aagttcttcc acatgaacat gtaccggtgc aaggacatgc 180
tgatcaagga cgtgaccgtg acggcgcccc gggacagccc caacacggat ggcatccaca 240
tgggcgactc atccgggatc acgatcacca acaccgtcat tggcgctcggg gacgactgca 300
tctccatcgg ccccgggacc tccaagggtga acatcaccgg cgtgacctgc ggccctggcc 360
acggcatcag cat 373

<210> 2674
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B2

<400> 2674

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cgccagcaac aaggtctccg atgaagcggc ggcggctacc gcggtgccgc ctgcaggtgc 120
cagtgccaaag acctcgagca gcaacgatgc ccgcgacggc gccatgggca gcgtgcagga 180
cgagccgcgg gagcagcgcc acgatgacta tcaccccgag atcgtccccg agaagatcat 240
acacgatgac gcgttgccgg tcgttgctgc acagaaggag accgccgcgg ccgccgacgt 300
ctcgaatgag gacgacgtgg agtcgccccaa gaaaagagcg gctctgtcgc cgggtgccgga 360
gactatcgtc atcgtcaccg acgcaacctc gaacgaggaa gacg 404

<210> 2675

<211> 387

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-043-Q1-E1-B3

<400> 2675

ggtcgaccca cgcgtccgat cgctggccca taaatatata tctatctatc gccatcgagc 60
aattataatc tcacagaata ataaacatca tggggcaagc ctcacggctc gtcctcctcg 120
ccgtcgtggc gctgctgtcc gccggcctcc tcccgcaggc gctgggtaag ggtaggggag 180
gcaggggaca cgggtggcgcc gtcaaccgc aggtcgccgg catctgctct cgcaccccg 240
tcccggaggt gtgcacgtcc accgccggc ggcacgcgtc caagtaccg gtcacgaca 300
acctggccgt gctgaacatg caggtggacg cgttcgccaa gcgcaacgcg caggcgcgca 360
agcacgtcgc gaggtcnggc ccgcaca 387

<210> 2676

<211> 412

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-043-Q1-E1-B4

<400> 2676

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atccacatcg gcgactccag caacgtgacc atcagcagca ccaccatcgg cgtcggcgac 120
gactgcatct ccatcggccc cgggagcaag atgatccgca tccatggcgt caagtgcggc 180
ccaggccacg gcatcagcgt cggcagcctg gggcgctaca aggacgagaa ggacgtggaa 240
gacgtgcagg tgacgggggtg cagcatcgcc ggcaccacga acggcctgcg catcaagtcg 300
tacgaggact ccaagtcgtc gctcaaggcc agcaagttcc tgtacgangg catcaccatg 360
gacaatgtct cctaccccat catcatcgac cagaagtact gcccacaaca ca 412

<210> 2677
<211> 298
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B5

<400> 2677

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taaaaaaaaa aaataaaaaa aaaaaaaaaa aaaaaaaggc aatcaaaaca aaaaagttaa 120
caacataaat atggggggggc tcctctagag gttccaccct tacgttaagt tacaggtaat 180
ttaataggcc tacaatgtag ccccttatat ccaacttcacg ggaggacctt ttcaaccatc 240
ccgtctggaa aaacgtggcc gttaccatcc ttatcgcact cgtcaaaatt cccgtttt 298

<210> 2678
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-B6

<400> 2678

ccacgcgtcc gaataatctc gaccaatggc ggcaccaacg gtggtgctca tcccgttctg 60
cgtcaccggc cacctgacgt ccatgctcca agccggcaag cggatgctga tgagcggcgg 120
cggcgacctg gccatgtcgc tcaccgtgct cctcgcgcca ctgccgatgg ccaggttcgc 180
gcacatcgta gagcgggagg ccacctcggg ctcgggggtc gacatccgct tccaccgcct 240
ccctgacgtg gagtccccg ccttctccgg cccggaggac atgatctcca gtttcatcca 300

gctgcaggcg tccaacacca aggcggccat tgccggcctg gcaagccccg tcgccgccgt 360
 cgtcatggac tactttttgc acacgctgtt cgacgtcgcc cgcgagttgg cactgccggt 420
 gtacgtgta 429

<210> 2679
 <211> 395
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-B7
 <400> 2679

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 ctccaatgcg gtagtgatgg actgcagtgt atacaggaga taagcggcca tctagcagag 120
 ttgcgaagag ttgtgactcg ctaaggaaaa tggttttgcc ccgagtccaa attgttaggt 180
 catcatgagg tcttctcatg cagcagacta acgagggtgc ttccactgag tgcccacaat 240
 cccatctatc tgaagatgga tgccgttgca ggaaataccc atgctcttcg cttctgatcg 300
 ggctcaacag cagacaaaaa ttttccatct tttgcacttt gagttcctca togacatttg 360
 cagactactg aagcagatgg gactctaaaa gaaag 395

<210> 2680
 <211> 449
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-B8
 <400> 2680

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 agttggcgcc ggtcgtggag gagctgattt cgccgatgaa cagcctggac gacggctgcc 120
 tcatgcacat cttcagcttc ctgagcccaa tcccagatgg cgcttccttg catgccaccc 180
 tcggctatgg ctgcgtgttg agaggccaat cagagatgag atggagcctg gagtttatcc 240
 tgatctcgag gctgctgttt ctgctgctag gccgggtgac accattctta ttgcggtggt 300
 tggttcccat gttgcatgta acatccaaat aaagaagcct atttgcataa ttggcggggg 360
 cgatcttctt gatgacactg tattgacctg ctcacgtggc ttgcacaacg cactggagtt 420

tctatcaaca tgcaagattg caaatctga

449

<210> 2681
<211> 360
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C1

<400> 2681

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aggaagggtcc tgcaggccgg ctggccgggtc gtcgatcgag gaaccaagct gctgctgctg 120
ctaccggacg acaccaacca tgatacggag gacgacggtg tgcctaggcc tgctgcttct 180
actactggcg gcgtcgactg cgacggcaca tttctcgatc ggcgacgtgg acgagtactt 240
gaacaggcgc acgcaggagt cccgccacag gaaccacggc ggcgcgaga tcaatgacct 300
catctccagt gctgcgcgt tccacgcaa cgtggatgca cgcgcgtatg gtcgccgctc 360

<210> 2682
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C10

<400> 2682

gggtcgacc acgcgtccga cacaacccg gaccgaccac gccatggcg tgtggatttc 60
gatcttcggt gagcgggtgc caagctcctt tccatcgggt ctcgcccgca ctgctgccac 120
cgagatcctg tcggcaccg cctccgcgcg ctcccgtgc cgcacgggac caacctgttc 180
gcctgttcat ccaactcagc acattcacgc ccgcatctcg ccgtgggcag caccgcactc 240
accaccgccg tcgcagtgag gtcacgagtc agctgaagag caagttggta cctggaatct 300
caagtcccag gtcaagaaca ggtaccgcag gatgaggcgc atggaggatg ctgtggcgag 360
ttcgtgagag gtctaggcca tcgtctccca gtcaactttg ggttgctgga ccgttgctctc 420
cttataatga aa 432

<210> 2683
<211> 398

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-C11

 <400> 2683

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ccttccttcc atcatggggc aaccggaact cccttggtct ccaagaaaac cttccccggc  120
gggttgccaa cggctcgttt cctcgtcttc aggggtgtcg cgctctccat cacggcgttc  180
ccggtgctgg cacgcattct cgccgagctc aagctgtctc ccaccgacct cgggcgcatg  240
gccatgtcag ctgccgccgt gaacgacgtc gttgcgtgga tacttctggc cctggccatc  300
gctttgtcag gcaccggttc ccctcctgtc cccttatggg gtgctgtctn cgggaactgg  360
ctttgtcttc ccggcgttcc tgttgctccg cccggggc                                398
  
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<210> 2684
 <211> 422
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-C12

 <400> 2684

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gggtcgaccc acgcgtccgc agacaatccc atcttcatcg acatgaagta ctgccccaac   60
aagttgtgta ctgccaacgg cgctcttaag gtcaccatca aggatgtcac cttcaagaac  120
atcaccagca cctcctcaac cccggaggcc gttaccctgc tctgcactgc caagggtcca  180
tgcaccggct tcaccatgga tgacgtcaac gtcgagtata ggggcactaa caacaagacc  240
atggctatat gcacgaacgc caacggcagc accaacgggt gcctcaagga gcttgcatgc  300
ttctagaccc tccatctact gacctcttc tctaattata atttttctct cgtccttgca  360
ttgcccatta gatgctatcc attggtaacg cacaacagta aaacgacaca catccgtcag  420
ct                                                                422
  
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<210> 2685
 <211> 400
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C2

<400> 2685

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gtaatctgca ggatctaagc aaagacttga tttagttatg gacggattgg taggcctctt 120
gaaagttcgc gtgggccggg gtatcaacct tgcctaccgc gacgcaagag gcagcgatcc 180
gtatgtcgtc ctacggcttg gcaagaagaa actgaagaca agcgtgaaga agagatccgt 240
gaaccccata tggcaagagg agctaactct gaacgtcaca gattccagcc aaccactgaa 300
gctggaagtg ttcgacaagg acaccttcaa caaagacgac cccatgggag acgcgagggt 360
ggacgtggcg ccaactgatgg aggcggtgag catgaacccg 400

<210> 2686

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C3

<400> 2686

gtccaccgac gcgcccgacc acgcatccgc agcagatgag gttgttgact gttcccatgg 60
gcggtcactg tgggaacttg ctgaagtga gtagagccg ctgtggatca aaggcggaaa 120
ccactgcaac ctagaactgt acccggaata catcaaact ctgaagaagt tcgttggagc 180
catagagaaa tcgccacccc cacctccgat cgacgagtgc atggagagct caagcccgtc 240
ggattgtacc ccagcagaac ccgagtgtac agcggactca aggaagagca cggactgcag 300
ggacaaagca aggccaaagca tagatcagag acaaagcacg gaccggcggg acaag 355

<210> 2687

<211> 170

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C5

<400> 2687

actaaagtga gtcgtattaa gttgttgact gttcgcatgg tcggatcatg tgggtagatg 60
aagcaatctg ctactactgg cagtggatca caggaggcat gcaatggggg ataggggtgt 120

accaggcca gatcattcat cttaaaggggt tctttggtgc catagaaaat 170

<210> 2688
<211> 426
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C6

<400> 2688

ccacacgtcc aagaatTTTT tctcattat cttttgtgtt ctgctgtact gcaaactgaa 60
agtgaatata atacaatggg gtagctgata tatgtacagg aaggcttctt gtagcagata 120
caaacaacaa cgcaatcaga tatataactc ttagtgacaa aggtgctgag gtgaagacac 180
tagagttgat cggagtacaa cgcctacac caaaaccgaa ggtgttgaaa cgcctaagac 240
ggcagttatc ggcagatata gatgttatta atgtcgatgg tggttcttca aaggaaggat 300
tcttgtctct tgcagttaca gtacctgatg gttaccatct ctccaaggct atcaataacc 360
ataagacatt gttttttctt atcttacttg caagtttgca ttattcatgg tagtcactaa 420
tgactg 426

<210> 2689
<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-C7

<400> 2689

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gccgtccgac ccggccaaag cggcgtgct caagaccttc caggacgccg gtgtgacgct 180
cctcaagggc gacctgtacg accaggctag cctggtgagc gcggtgaagg gcgcggacgt 240
ggcatctcc gtgctcggat cgatgcagat cgcgcaccag agccggctcg tcgacgccat 300
caaggaggcc ggcaacgtca agaggttctt cccgtcggag ttcggcctgg acgtggaccg 360
cacgggcacg gtggagccgg ccaagtccat cctaggcgcc aaggtgggca tccgccgcgc 420
caccgaggcc gcgggcatac cct 443

<210> 2690
 <211> 286
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-C8

 <400> 2690

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 atttattctc caaataccaa ccaaattcag gggttacctc ttgtctctct ctctctcttt 120
 tccttttgat taaaagtaag tgaattaggc gagggtttaa ttatttattt tgtcaaaact 180
 tatgtgagtc atgaaatggt gcatcatgct gagcctaaat tattcttttg tttgatgcac 240
 atgtttgaat tggtttgaat ttgaaatttg gtttgagttt gatttg 286

<210> 2691
 <211> 228
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-C9

 <400> 2691

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 caacggttta cgttttgga acggaatttc ttcgggaacc aaattaagct tggccttacg 120
 aaccttgccc ctattgggcg tgctctgctg caacatggca accaccggtt ccgccaacaa 180
 gaaaggaatc aaggtcttcg gaagcttcga gggttcagaa tacggaag 228

<210> 2692
 <211> 367
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-D1

 <400> 2692

 attcacgggt cgaccacgc gtccgatga gcaccaagga ggtggacgag cagatgatca 60
 acgtgcagaa caagaactcc tcctacttcg tggagtggat ccctaacaac gtcaagtcca 120
 gcgtgtgcga catcccaccc gtcgggctgt ccatgtctc caccttcgtg ggcaactcca 180

cctccatcca ggagatgttc cgccgctga gcgagcagtt cacggctatg ttccggcgca 240
 aggccttcct gcattggtac accagcgagg gcatggacga gatggagttc accgaagccg 300
 agagcaacat gaacgacctc gtcgccgagt accagcagta ccaagacgcc acagccgagg 360
 agtacga 367

<210> 2693
 <211> 398
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-D11
 <400> 2693

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 gacgtcgtct tcaagaacat ccacggcacc tccaacacgc cggaggccat cacgtcaac 120
 tgcgccaaca acctgccctg ccagggcggt cagctcatca acgtcgacat caagtacaac 180
 aggtccgaca acaagaccat gtccgtctgc aagaacgcca tcggcaagtc cattggcatg 240
 gcgaaggagc tcgcctgcgt ctgaacctac ttgcatccat cactcactct tcgtcacctc 300
 tctctttctc actctcgcca gtcttttttt aggcctctgg caatctgoga actttcttat 360
 tcattctact agtgtggatc tataattcca ttcaaaat 398

<210> 2694
 <211> 416
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-D2
 <400> 2694

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 ctcaccaa at aagggtccgc ccttttccga cattcacagg ggggacagga aatcagcggc 120
 catggcctcg attccggcga cgaccttcgc cgctcatctta tccgtctctt tctgtgccgc 180
 ggctggcacc gccgtcgaca acgacctccc cgactacgtc atccagggcc gcgtctattg 240
 cgacacctgc cgcgccgggt tcgtgaccaa tgtcaccgag tacatcgcgg gcgccaaggt 300
 gaggtggag tgcaagcact tcggcaccgg caagctcgag cgctccatcg acgngtgac 360

cgacgggaac ggcacgtaca cgatcgagct caaggacagc acgangagga catctg 416

<210> 2695

<211> 366

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D3

<400> 2695

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ctggaggaac ggcaagttcg cgcaggacat gatcctccgg ctcaggaacg tggagagcgg 180

ggagattcag ctgcagctgc agtggctcag catccctcct gctgcagcca gcaggtgaag 240

gaaacgaagc aatcgcatctt tcaacctctt tgtgaatgtc ggattgtaac aacttaaacc 300

agcaattaat ggggtcaggg tcagtcaggg tagttcatgt gttgccctat taatggtaca 360

ttgggg 366

<210> 2696

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D4

<400> 2696

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agcttacagg aacatttgag tggatcatgg acggattggt aggcctcttg aaagtccggg 120

tggtgagggg catcaacctt gcctaccgcg acgcaagagg cagcgatccg tatgtcgtcc 180

tacgacttgg caagaagaaa ctttaagacga gcgtgaagaa gagatctgtg aaccccatct 240

ggcacgagga gctaactctg accgtcacag atcccagcct agctctgaag ctggaggtgt 300

tcgacaagga cacgttcagc agggacgacc cgatggggga cgcggagatc gacgtggcgc 360

cgctggtgga ggcggcgaac g 381

<210> 2697

<211> 420

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-D5

 <400> 2697

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 tggtcgtggg cgccgtcctt gggcgctcg tcgccggcgg gtcgtgcggg cccccaagg 120
 tgccaccggg cccaacatc accaccaact acaacggcaa gtggctcacc gctagggcca 180
 cctggtacgg tcagcccaac ggtgccggcg ctctgacaa cggcggtgcg tcggggatca 240
 agaacgtgaa cctgccaccc tacagcggca tgacggcgtg cggcaacgtc cccatcttca 300
 aggacggcaa gggctgcggc tcatgctacg aggtgagatg caaggaaaaa cctgagtgtc 360
 cgggcaatcg agtcacgggtg tacatcactg acatgaacta cgagcctatc gctcccctac 420

<210> 2698
 <211> 405
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-D6

 <400> 2698

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 ttccaccggc acgcatgaca agtgcgcgga gtgcgacaag accgtccact tcatcgacct 120
 cctcacggcc gacggcgtca cctaccataa gacatgtctc aagtgcagcc actgcaaagg 180
 gatcctctcg atgtgcagct actcttccat ggacgggtgtg ctgtactgca agaccactt 240
 cgagcagctc ttcaaggaga cggggagctt ctccaagaac ttcacgccag gtggcaagtc 300
 ttcagacaag ggtgaactga caagggcccc cagcaagcta tcatctgcgt tttctggtac 360
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<210> 2699
 <211> 419
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-D7

 <400> 2699

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 ccacattgag gttgcggcaa aacatgcagt agttgagaag gtggaggagg acaaggagga 180
 ggcactaaca gtggcggcga aacaagagcc agcagccacc attgagcctc agcagattgc 240
 tagtgagggtg accacttcgg aagtggcgggt cgtcgttgtc gagcctgaga acaaagacga 300
 ggaggaagtt gtggagaaga ccgtcatcga gaaggagaag ccatcagcag tccatgcaga 360
 ggaaaatatt gccaccaaca aggtggcagc cgagcccacg acagaattga agaaagaca 419

<210> 2700
 <211> 441
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D8

<400> 2700

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 gaccgtgggc gacaccgtgc aggacgcgtg cagcaagaca caattcccca agatctgcgt 180
 ggacagcctc accgcaaagc cagagagcca gaaggcgacc ccgcgccggc tggcggagct 240
 gttcgtgaac atcgcggccg agaagggatc cgggatggcc acgttcgtgc acgggaagta 300
 caacaacgcc aaggacagca ccgtgttcaa gtgctacgac agctgctcgg acgacgtcga 360
 ggaggccgtc gccacctca acggcctcgt ccgggatcca ccgacgcca gttcctggag 420
 cttaagtcgt ggggtctcct c 441

<210> 2701
 <211> 367
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-D9

<400> 2701

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ggcgcgtggca gagatctgca tgaagactcc gtcccccgac ctgtgcacca ggacggcgagg 180
gaagcacgcc aacaggtaca acgtgggtgga cacgggtgacg gtgctagaga tgcattgtgga 240
cgcggttcaag aagcgcgtga acgcggcact gaggtcacc atagaggagg tcaagacggt 300
cgcgacgccc gacgcgcaga gggcactgaa cctctgcaag acctactacc tggacgcccgc 360
cgacaac 367

<210> 2702
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E1

<400> 2702

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tttctccttt tcttgccacg gcaaacacac ttcgccggcg agagcatggc gatggcgtag 120
cgtgtcctgg aggtcacctt ggtgtcggca aatgacctca agaaagtgtc gctcttctcc 180
cggactcgca tctacgcgtt ggcttccatc tccgattcgc acctcgcac cccttccac 240
agcacccaag cagaccacag caacggctgc aacctctgct ggaacgcggt ggtacacttc 300
cccatcccgg ctgccgtga caccgcggc ctcgcactcc acgtgaggct ccgcgccag 360
cgtctatacc tgggcgattg cgacatccgc gaagtgtttg gtgccaacca acaact 416

<210> 2703
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E10

<400> 2703

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gcgagatcga gggccaccac ctgacctccg ctgccatagt cggccacgac ggcgcggttt 180
gggcccagag caccgcattc ccacagttca agacagagga gatgaccaac atcatgaag 240
acttcgacga gcccggttc ctggccccga ccggcctctt cctcgcccc accaagtaca 300

tggtcatcca aggcgagccc ggcgctgtca tccgcgggaa gaagggatct ggaggcataa 360
 ctgtgaagaa gacagggcaa gcgatggtgg tcggcatcta cgacgagccc atgacccccg 420
 gccagtgcaa cat 433

<210> 2704
 <211> 365
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-029-Q1-E1-H10
 <400> 2704

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 gcccttcgac acgccggctg acgacttccc ggtgctcatc ggcgactggt acaccaagga 180
 ccacgccgtg ctggccaaga acctggacgc cggcaagggg atcgggcggc cggcggggct 240
 ggtgatcaac ggcaagaacg agaaggactc gtcgaacccg cccatgtaca acgtgaaggc 300
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 catcc 365

<210> 2705
 <211> 396
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-H11

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 ccgtcgtggc gctgctgtcc gccggcctcc tcccgcaggc gctgggtaag ggtaggggag 180
 gcaggggaca cgggtggcgcc gtcaacccgc aggtcgccgg catctgctct cgacccccgt 240
 tcccggaggt gtgcacgtcc accgccgggc ggcacgcgtc caagtaccg gtcacgcaca 300
 acctggccgt gctgaacatg caggtggacg cgttcgccaa gcgcaccgcg caggcgcgca 360

agcacgtcgc gaggtcnngc cgcaccatcc cgccgc

396

<210> 2706

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H12

<400> 2706

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ccatcgcgcc caacaccaac ttacgtaca agtggcagcc caaggaccag atcggcagct 120

tcttctactt cccgtccatc ggcatgcagc gggcgccggg cgggtacggc gccatcagcg 180

tggtgagccg cctcctcatc ccggteccct tcgaccagcc gccgcgggag agcgaccacg 240

cggtgctcat cggcgactgg tacaccaagg accacgaggt gctggcgcg cagctcgacg 300

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tggaggccgc cgcgcccatg ctcacct 387

<210> 2707

<211> 287

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H2

<400> 2707

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ttcagtcata tgacgtgtag gaagctgtgg aaggtcctga ggagcagcag cgggtggcggc 120

gatctggatg aagactccgt ccccgacct gtgcaccagg acggcgggga agcacgcca 180

caagtacaag gtggtggacg cggtgacggt gctagagatg caggtggacg cgttcaagaa 240

gcgcgtgaag gcggcgcgga ggctcgccaa cgatgaggtc aagacgg 287

<210> 2708

<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H3

<400> 2708

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gctcgcgtcg gccgcccccg cgggccacgc agagcgaggg acaacgaccg accgaccgac 180

cagctcgagg tgaatgaaca gccgcatacc gttcctccag aaaatgcacc gctggatcat 240

ccctagctgc ggcgacaccc gccagccgcg cccttcctcc 280

<210> 2709

<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H4

<400> 2709

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tcccgccctt ttccgacatt cacagggggg acaggaaatc agcggccatg gcctcgattc 120

cggcgacgac cttcgccgtc atcttatccg tctctttctg tgccgcgget ggcaccgccg 180

tcgacaacga cctccccgac tacgtcatcc agggccgcgt ctattgcgac acctgccgcg 240

ccgggttcgt gaccaatgtc accgagtaca tcgcgggcgc 280

<210> 2710

<211> 303

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-029-Q1-E1-H5

<400> 2710

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cgaggttggg gccgccagca cgttcagccg ttctgtttct tgatataacg agagaaggat 120

ggcagtgttt caggagagctg tcgtattctt gtttctcctc ctgcgtcgag cagaagtggg 180

aaccatcgat gccaaaatgg gagtagccat gcccatgcat gccttgataa tggagaaagc 240

gaaacagcat gagacggaga ataaggagga gaaaagcagg gagaaggaag agagtcaatg 300

ctt 303

<210> 2711
 <211> 288
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-029-Q1-E1-H7

 <400> 2711

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 cctaccacta ccgcaaggac gagaagctcc tgggtctacga ttacatcccc aagggcagcc 120
 tgctgtacgt cctccacggc gaccggggca tggactacgc ggcgctggac tggccgacgc 180
 ggctcaaggt ggccgtcggc gtcgcgcgcg gcacggcggt cctccacacg gcgctcgccg 240
 gacacgaggg gcccacggc aacctcaagt cggccaacgt cctcctcg 288

<210> 2712
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-029-Q1-E1-H9

 <400> 2712

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 tacgggctga tcagcgtcca cagccgtgac ctgatcccg tgccttcga cacgccggcc 180
 gacgacttcc cgggtgctcat cggcgactgg tacaccaagg accacgccgt gctggccaag 240
 aacctggacg ccggcaaggg gatcgggcgg ccggcggggc tggatgatcaa cggcaagaac 300
 gagaaggacg cgtcgaaccc gccatgtac aacgtggagg ccggcaagac gtaccggttc 360
 cgcgtgtgca acgtgggcat caaggcgtcc ttcaacgtcc gcatccanga ccacatcatg 420
 a 421

<210> 2713
 <211> 440
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-A1

<400> 2713

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catccgtcgt cgccaaccgt agcaaggagc caaggacatc accaccgccc agcaataatg 120
gcgagagca tgaagattgt ggcgctggcc ttggtggccc tgctggtggt ggcggcgggc 180
gcgcccgtgg ccaccgagta cggctgctac gacgactgct acgagcgctg cgccaacggc 240
aagaaagacc ccgcctgcac caagatgtgc aaccaggcgt gcggctccac ggaccaaggc 300
gccggtgccg ccggcgccgc gccggcttga tcgcccagcg cattcatcgc ttcagctcga 360
tataatcgct gtcctgcag caaccacat atgattcgat caatcttctt cctctaattt 420
ctcgaccccg tcgaattttt 440

<210> 2714

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A10

<400> 2714

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tctctaccg tgagccggat ggggtccagga tgctgccagc ccatggcgcc gggagcgacg 120
gcgacgtctc ctgcgtgggg cactgcctc cgggacagga cctccaccgt ggtgcgacat 180
gggacttcac cttcgcggcc gcgaagccgg cgaagaggaa gacggcgagc gatgtggggg 240
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catcgccggg gccgtcatcg gccgtcaccg acgaagagtt taacctggag atgcatcagt 360
tcatgtcaat gctaccactg tctgacgagc acggctggaa cgcataatgc ggccgggtaa 420
aatggaaatc g 431

<210> 2715

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A11

<400> 2715

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cgacgcaaag gccaaggacg cccctgtcat ctcgccgcc ttcgagagca tcccggagct 120
ccacgagggc gccatgaagg gaaagtggga agctactcct tcgccttccc aaacttggtg 180
gaggacaaga tgaactactc caaggagccg tctcagcagg acctccagcc ggagccagca 240
gcggcatcgg cggaggcggc caacaaggcc gtgccaacac cggcagaagc tgaagcgagg 300
gcagacggca gaggcgcagc cgcagacgag cagcaacccg gaggcgactc cggttccggg 360
agcaggacga aagggcggct tgttctcaag cttcccctgc tgc 403

<210> 2716
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A12

<400> 2716

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cgcgacgtgc gccgcgtcac gtacctcgac tccgacgtgg tcgtgggtgga cgacgtccgg 180
acgctggcgt ccgtggacct cgcggggccac gtggtggcgg cggccgagta ctgccacgcc 240
aacttcagca actacttcac ggacgccttc tggtcgcacc cggcgtcaa cggcaccttc 300
cacgggcgcc gcccatgcta cttcaacacg ggcgtcatgg tcatggacgt cgacaagtgg 360
cgcgccggcg ggtacacgcg ccgggtggag gagtggatgg ccgtgcagaa g 411

<210> 2717
<211> 419
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A2

<400> 2717

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cctacagctc ccggttcgcg ttcccgtcgg aggagagcgg gtcctcctcg ccgttctact 240
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 gatcaggtgc gcagtacaag tggctggagg cggacctgga gaaggtggac aggtcgggtga 360
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<210> 2718
 <211> 394
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-A5

<400> 2718

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 gcggctgctg atgacgattg caagcctgcc ggtgacgagt caacgtcgtg gaagcgccctc 180
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 caggcacggt tcggcttcga gatcaaggag gtgggcatga ccagccgcta cgcgtccgct 360
 gaggatctng cacagatgga cagcgaccag gaag 394

<210> 2719
 <211> 441
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A6

<400> 2719

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 gcaagtgagc aagctatata tatatatagg agattcttcg agcgagctag tagcgagatg 180
 ggttccgcgc tcctctttta ctgcactcgc atcgccgtcg tcgtcgcatt gtcgtcgtcc 240
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cttgagtgct ccgctaacgt aacggaaata gcaaaggcgc gcaagctgat cgatgtccat 360
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 actgcaagga ccgcccgtg c 441

<210> 2720
 <211> 342
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A8

<400> 2720

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 ggatctgctg tccgcggggc tcctcacgca ggcgctgggt aacggtaagg gaggcacggg 180
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<210> 2721
 <211> 428
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-A9

<400> 2721

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 agggctgcgg ctcatgctac gaggtgagat gcaaggaaaa acctgagtgc tcgggcaatc 180
 cagtcacggt gtacatcaact gacatgaact acgagcctat cgctccctac cacttcgact 240
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 tcgtgttcca catcgagaac ggctgcaacc ccaactacct ggccgtgctg gtgaagtatg 420
 tggcggac 428

<210> 2722
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B10

<400> 2722

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gcaccaggac ggcggggaag cacgccaaca agtacaaggt ggtggacgcg gtgacggtgc  180
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aggaggtcaa gacggccgcg acgcccaggg cgcgaggggc gctgaacctc tgcaagacct  300
actacctgga cgccgccgac aacctcggcg cctgcaagcg cgccatcggc ttccgcgacg  360
ccgtcaccat ccgcgccacg atgagcatgg tggcgagga cacgcagaac tgcgacgagg  420
a                                                                 421
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<210> 2723
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B11

<400> 2723

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tgtgtaggca ggcagacgca ccgcgcatgg ccgaggcgcg ctgctctgcg catggccttg  180
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cgtcgcggcg ccgtccggtg tggtatagtt gtggccaccg acgacataaa aatttcacgc  300
atacagttaa agcggagagg aagagtaggt tccataccat tacccttctc caactaggag  360
cgatctgttt tcttctacc agcaatttct ctccgttttc tcgcgagtcg tgctgat   417
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 <211> 425
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B12

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ccttcattgat ccaggggaca atattcatgt cactgcttgc tgggtgctctg tttgggcaac 360
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tgctcg 425

<210> 2725

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B2

<400> 2725

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tgccggtggt tgggaaccac ctgcgcaacc ccacgcgcct cacaagcgcc tcctcgtcct 240
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aaaaaggagc acgaaaggca tccaggaatt atgagaggta tgtagttcgg caaaaacgag 360
cagaaggaaa gaaggcccta aagggatatc ttctctatgg aaagccatgc ctcatttaca 420
ggatggaaca caggtagctt tgctaactca catgcaa 457

<210> 2726

<211> 93

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B3

<400> 2726

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ccttcctcca gcagtcgagg gccaggacg aca 93

<210> 2727

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B4

<400> 2727

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ggcggtaccc ccttcctat cagcctcat cgaatcctca gatctaagtt ttttttggtt 180
ttgtgagtta tccaaagttg gaccgcaaag atgagtactg ctaatcacta tcagcacatc 240
aagtcaacca agcctgttgt agatctacta atattggagt gtttctttgc ttaaaatgtg 300
gagatgttca tagggcactt ggacctgaca tttcaaaggt tttatctgta actttggatg 360
attggtctga cagtgatatc gactcca 387

<210> 2728

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B5

<400> 2728

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acgtgtacta cgacaacgac gaagaagaat gaacagctag cagacgtacc ggcgcccgat 180
tcacaagtgt acagaaaacg atcgactcca ctccaactat acatataccta ctatggcttt 240
tgctacaacc cgatggatca gaaggcatgc atgcatgtac aggcaggcat ggccatggcg 300
atgcctgcag gctgcaaacg aatttgatca gatggctgac accttgggga 350

<210> 2729
 <211> 365
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B6

<400> 2729

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tcatctaccg ggacttcaag agctccaaca tcttgctoga cgcgaaattc aacgccaagc 180
tgtcggactt cgggctcgcc aaggaagggc cgatggggcg tgagacgcac gtgtccacca 240
gggtcatggg cacctacggc tacgccgcgc cggagtacgt agccaccggg cacctgacgg 300
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cgctg                                           365
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<210> 2730
 <211> 410
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B7

<400> 2730

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cggcgggtcgc cgatcatggc caccaccccc gccgaggatc cggagcctgg gctacctctt 120
cccaaggctc tctgcgagca gccgcggcgg cggcgcccgt gcgtcctctt tagcttctcg 180
gcagcgcgcg accgcttctt ccggggccgg ttcctctcgg cgggcctgcg ccccttctcc 240
gtccgcctcc cctcgccggc cggcaccagc accgtcgtcc acctctgggc gccgccgcgg 300
tccgcgcggc ggcccggtgt cctcctccac ggcttcggcg cgtcggcgac gtggcagtgg 360
gccccgtacc tccgcagcct cctcgccggc ggctcgcacc ccatcgctcc 410
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<210> 2731
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B8

<400> 2731

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tatggaatgg atgacgcaga tgacatctac atgcgatcat ggactggcac tattattggc 180
cctcataata ccgtccatga gggtcgcatac taccagctga agttgttctg cgacaaggac 240
taccctgaga agccaccatc agttcgattt cattcaagaa taaacttaac atgcgttaat 300
catgaaactg gagtgggtga cccgaagaag ttcagcgttc tgggtaactg gcagcgtgat 360
tactcaatgg aatacatcct aacccatctc aagaaagaga tgaca 405

<210> 2732

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-B9

<400> 2732

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tcgatcctcc atgggtcaagg catcggggcga aaccagcaaa tatctcgggg cgcggtggaa 180
cgtcccatga tgactgctcg cgcggggggg tccaatgctg gcggaagtgt tgccgtaaag 240
cttcggcgcc tcggaacttc tcgccatcgg tgatgggtcca ccgtggaccg catccctccg 300
catctatgct cgactccacg cagcgtgagg acacgtgtca tctgaagagc aagttgggac 360
ctggaatctc aagccctaag tcaagaacag gtaccgcatg ttgaggcgct tggaggatgc 420
tgccatgtgt tcgtgagtgg tctaggccgt cgtctccc 458

<210> 2733

<211> 72

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C1

<400> 2733

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gcataccgac gg 72

<210> 2734
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C10

<400> 2734

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aggatgctgt cacccttatg ctcagtgttc gtcaggcaaa tcttcttctt tctcgttat 180
ggactcagge actgtcacct gaaaatgttc cacggaatta tgaagcaatt tctcatactt 240
acagcttgat gctattgttt tctagagcca agggctcagg tgccgacgtt ttggttggtg 300
gctttcagct tgctttttca ttaagaagtg tttcgttaca agcaggtttt cttccacctt 360
cacgcaggcg ctctcttttt actttggcaa cttcaatgct tgtg 404

<210> 2735
<211> 394
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-030-Q1-E1-C12

<400> 2735

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gggatctcca cttcatctgg aaagcagcct gcatatatgt cgatactccg tgtaaggtag 180
atgctatata aactgtcaga gtatattggg catgttagaa tatattagac aactactaat 240
atgattggtt taggattgat tataatcctg gataaccttc cttgtatcta agataacatt 300
ccttgatatc aagataatct tccttatctc taggatagcc ttcttgtctt caagtcgtgt 360
attcctatat attctctcta aaggcttcat tgan 394

<210> 2736
 <211> 398
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-C2

<400> 2736

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catataccta gcagtgtctc tgcataaaaa gataaaaggt angangangc gcagtgcgtg 120
gtgggattat ttgtgangag atattggagt tattatatat atatatatat aggtagacga 180
tagatagaca gctagatcta tataaccatg gtggatgggt tccgatggat cagaccgggc 240
tctttcgtcc tgtacttggg cttcttcttc ctgtccgcag ccctgtcgga ggccaatata 300
ggcgacttcg atgaatactg gcagcagcgc aagctcatgg ccgacgcgcg ggctgaagcc 360
acgtacaagc atgaccgggt cgaagtcgcc aaccaact 398
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<210> 2737
 <211> 398
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-C3

<400> 2737

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nagctttccc caattcccc cttctccca tttctacca ccgccgcgcg tcccccggtt 120
caacaacacc atgagggagt gcatctcgat ccacatcggc caggctggta tccaggctcg 180
aaacgcgtgc tgggagctgt actgcctcga gcatggcatt caggctgatg gccagatgcc 240
cggtgacaag accattgggg gaggtgatga tgctttcaac accttcttca gtgagactgg 300
cgctgggaag caggtccccc gtgctgtttt tgttgacctt gagccactg tcatcgatga 360
ggtgaggact ggcacctacc gccagctctt ccacctctg 398
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<210> 2738
 <211> 385
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C4

<400> 2738

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ccgccaacgc caaccagccg gccaacgtcg ttccaccgca agtagtggtg tcgaagcttc 120
cgccggaggt gctggccaag ctcccggccg acgtgctggc cagcatcccg ccggagacgc 180
tggccaacat cgcggcgtcg caggggcagc tgcagacgag cgagatcctg gccaccatcc 240
ctgcggcgca ggcgcagggc cagctgccgg cggacctgcc gccggatgtg ctggccaagc 300
tcacggccgt gcagagccaa ctgccgggca acattacgcc cgagatgatg accagtctcg 360
ccgccgtgca gcagcctgca gctgc 385

<210> 2739

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C5

<400> 2739

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tccatgggag agcctccaac ctccctgtg tactctctcg aaccaagtg caaggtgccc 120
ccgcgtgtc tatggccgca cgcgcctggc cttgccatct gtggagctcg gcagccggag 180
ccgcgtatcc gcccgggctg tggctgaccg gcttcgcttc attaatctgg cgcgagatta 240
cgagtcacct gaagatcatc ctggtacctg gaatctcaag tcccaggta agaccaggta 300
ccgcaggatg aggcgcgtga aggatgctgt gatgagttcg tgagtggctt aggccgtcgt 360
ctcccagtca acttttgggt tgctggacgt tgtctctta taatgtaaat actta 415

<210> 2740

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C6

<400> 2740

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ccatatccaa agtttctcaac atcgtttcgt gcagcctgca tcggtcgacg agggctgcac 120
gaacgatggg gtccgcctcc gcctcagtga cgacaaccag cctgctggcg ctggcgctgg 180
cagcgctggc tttcgtctcc agggccgcgg cgcagggcaa cggctgttcc agcgtgatga 240
tgaccctggc cccgtgcatg gacttcatct ccagcaaggc gtcggagccg gggatctcct 300
gctgctcggg gctggccgga gtcgtgcaga ccgacccccg ctgcctctgc atggtaactgg 360
acggcactgc cacgtccttc ggcatacgcca tcaaccagac caaggcgctg gagctccccg 420

<210> 2741
<211> 375
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-030-Q1-E1-C7
<400> 2741

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cacagcagcg acccctacgt cgtcctccgc cacggacagc agaaagtcaa gtcaagtata 120
aaataccgca cgatcaatcc ggaatggaac gaggaactca ccctgtccat cacaaacatg 180
atgaacccgg tcaagattga actcttcgac catgacacgt tcaccaagga cgacagcatg 240
ggcaacgccg agttctccat cctcaacttc gtggagatcg ccaagcagga cctgagcgac 300
gtcnccgacg gcacgggtgat gaagacgatc cacacggaga agggcagctg cctcgccacc 360
gacaggcaca tcacg 375

<210> 2742
<211> 389
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-030-Q1-E1-C8
<400> 2742

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tcgccgtcgt ccggcagggg taatataatt tggttcttct ccggccgggt gtgcatggca 120
aaacgaccca cgggtgccaa gttcggcacc tgggacagcg gcaatgccgg gtacacggcc 180

taatttcgaca aggtgcgcga taacaagggc gcaacggcgc cgccgctgcg ccggccgcgc 240
agccccaacg accccgaccc cgaccgcgag cccgagccat aggagggggc aatgaggaga 300
gtccccccgc cgtcgtcgtc gatgcccggc accgcatgag gccaccgcga gccgcccgcg 360
ccggggcggc gccacgggca gagccaccg 389

<210> 2743

<211> 173

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-C9

<400> 2743

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actgcaataa ctgtcgttac ctatgcttct cacctgtgat tttttggaca caatatgtta 120
aggtccattc aattctaattg agacgcctga tgaggctact agcaaacaac aaa 173

<210> 2744

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D1

<400> 2744

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cgtcgcccc cgaaccggcc tttgccggcg caagggccgg cctcgctgt ctccaagcaa 180
ggaagcagca gcagcaaccc cgacgacccc cgctgcggca gcagcagcag cgacgaccac 240
taccagcacg acgtgatcat gctgaggcgg acaaggagcg ggcgggcatt cccgccgccg 300
atctccgtga tcggcaaggg cgggcggccg tggctctgcc tgcgggcgca ccgcgagggg 360
ggacgcctcg tgctgcggca gatgcgcctg ccgtcgcagg agctgctgca gccctgc 417

<210> 2745

<211> 415

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-030-Q1-E1-D10

<400> 2745

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agtcaaccac caccaccatc accgtttgca tgcattgcgtg cgtgcgtgcg cgcttgctgtg 180
gacgcagtat ttgtacacgt gtgcatgccg gcttgacggg taactgacgt gtatgtagct 240
actagctcgg atctggatgt cttttgtgtc tacgtagggt acgacgagga gacgatactg 300
taaggtggca tgcattgctc agggagctgt tctggaacac ccttccaaag acgctgacgt 360
gtcagcaat gccatccgat actatggaca gcaagtcagc aacgagccan aagat 415

<210> 2746
<211> 429
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-030-Q1-E1-D11

<400> 2746

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tggcgctcgc ccccgggccc gcggccaagt ggcagcggac caggaacggc accgtggtca 180
gctacgaccg ccgctcgtc atgttcgacg gccaccggga aatcttctta tccgggtcca 240
tccactaccc gcggagcccg ccggacatgt ggccggagct catcgccaag gccaaggang 300
gcgggctcaa caccatcgag acctacgtgt tctggaacat ccacgagccc gagaagggtg 360
agttcaactt cgaggggcag aacgacgtgg tgaggttctt ccagctgac caagagcacg 420
acatgtacg 429

<210> 2747
<211> 377
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D12

<400> 2747

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gctccctggc ctcatcctgg gctgctccgt cctggaggcc ggcggcagcg tggacgcca 180
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cttcggccag cgtttctcct tctgcctcct cagcgccaat agctcccgcg acgcctcgag 300
ctacctcacc ttcggtccca acccggcggt gatggggccg ggcaccatgg agacggacat 360
cgtgtacaac gtggacg 377

<210> 2748

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D3

<400> 2748

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aggacgacga tggcccggcc gcgcctctc ctaccttcc tgctcgccgc gcggccgtg 120
ctgaccacgg tgcccggcgt cgcgctcgcc aagtccaagc tcgccaagaa gagcgacgac 180
gtcgtgaacg ggcccctcct gaccgagaag atccaggcga agaagacgct gatcgtgggg 240
ccggacgagg agttcaagac cgtgcagtcc gccatcgacg cggtgcccgc cggcaacgcc 300
gagtgggtca tcgtccacct ccgctctggc ctgcacaggg gcaaagttgt gataccggag 360
aacaagccct tcattctcgt gaggggcaac cg 392

<210> 2749

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D4

<400> 2749

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cgacagccgc gacgcctggc agccgctgaa gctcgccgtc gagcgatacg cgccgcggtt 120

ctcactcatc gtccacccgt tcccactacc ataccacaca tatgcattct atgcctgccg 180
cgcactttac atagctaaca agttgaattc atcatcaaca tatccattgc tggagctggt 240
cttcaagaac caggaaaagt tctacaattc tgccacatca tctctctcgg gcccttccgt 300
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gtcgggcttc agcgatggga agacagac 388

<210> 2750
<211> 358
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D5

<400> 2750

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ctccggaaag atcatcatct gcgaagccgg cggcgatgtc agcaccgcga aggccaagat 180
gctaaagggc atcggcgtgg tcggaatgat cgtggtgacc ccggagtgtg tcgggtccggt 240
aatcatcccg aggccgcacg ccatcccgac ggtgcaagtc tctaacgcgg cggggcagaa 300
gatcaaggcc tacatccaca aggcgcgggg cccgacggcg acgttcgtct tcaaaggg 358

<210> 2751
<211> 384
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-D6

<400> 2751

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gtccccgcgc gtgtggctgc tcgccatggc actggcgctc gcctgcgtgc tgctcgtgag 180
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cccggccacg gacaagtcgt gcaagcccga gggcggtggg gtggtgctgc cgggcggcgg 300
catcgacctc gacggcgacg gtgacgagga cgagctgccg cagttccaac cccacctcat 360

gatcctcggc catggccact gatg

384

<210> 2752

<211> 433

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-D9

<400> 2752

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tatagctagg atcgatcgtc agtaaaatgg caggctccgc cgtcctgagg agccccctgt 180
ccgtcctcct ctacatcctc gccgccgtgc ccgccaccgc cgcggcgacg ccgaccgacg 240
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cggagcgcgc ggaggcggcg cacgcgtaca accgcgcggc gtaccagacc gaccccgtag 360
ccgtcgtgca gcgcttcaac gacggcgtgc acanggcgac ggcgacgcgg tcgcgggtccc 420
tggcgcacag ggc 433

<210> 2753

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E10

<400> 2753

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gttacctcat ctttattaga atctgttgaa agtgggtgatc ttgtaagata tgggtctaatt 180
ccggagttca ttggtcgttt gccatttcta gtaagtttgg cagctctgaa tgaaggccag 240
ctcgttcagg ttctgacaga accaaagaat tcactttcca aacaatacag gaaaatgttt 300
aacctgaaca aagttaggct gcacttcact gatggtgcac ttagattggt agctaagaag 360
gcgatagcta aaagcactgg tgctcgtggt ttaagagcca tcttggaac tggtcttttg 420
gaggccatgt at 432

<210> 2754
 <211> 432
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-E11

<400> 2754

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 acggcgggccg tgggcccgtc gctgtacacc aacggcacccg ggtgcggcgc gtgctatgag 180
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 agcgggcaga agggcgagca cttcgacctc accataccgg cgttcctcaa gatcgccgag 300
 gagaaggccg gcacgtgccc catcacctac cgcaagggtg cgtgcgagag gaaaggcggc 360
 atccggtaca cgatcacggn gaaccagcac tacagcgagg tgaacggtga caccgtgggc 420
 ggcgcggggg ac 432

<210> 2755
 <211> 424
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-E12

<400> 2755

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 gaccaccagg gtatccatca cggcttcgaa tgggtggctta gaccatgacc tctccatcgc 180
 cgataaaatc agtggcgaga atgacagctc ccatgcagtt cagcatgggt ttgactggaa 240
 gtgggtgggt tttgggtggt cggtggctgc ggtttgtgtg ctcaacaccg gactggtagg 300
 caaggtcctg ttgcttgag cagcgagacg gcaggcaaag aagtgatgtg aggagcaacc 360
 ttccagcctc tgcagaaagg cattcgtcag gctgtagcta caaccgtaca ggcaaaaagt 420
 attg 424

<210> 2756
 <211> 334
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E2

<400> 2756

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 cttcgggtcc ggcaagacaa atcaagtcgc gatggagatg aagaaggctg cctgcgccgt 180
 cctcgccgcc gccgcctccg ccaccgtggt cctcgccgcc gaggccccgg cgcgcgcgcc 240
 catcagcgcc tctcggcgcc cgttccccgc cgtcggcacc gtgctgggcg cctccgtgct 300
 ctccctcttc gctactacc tgcagtaaaa ttaa 334

<210> 2757
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F10

<400> 2757

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 ccggcaagac tatcaccctt gaggtggagt cttcagacac catcgacaac gtcaaggcca 120
 agatccagga caaggagggc atcccaccgg accagcagcg tttgatcttc gctggcaagc 180
 agctggagga tggccgcacc cttgcggatt acaacatcca gaaggagagc accctccacc 240
 tgggtgctccg tctcaggggt ggcatgcaga tctttgtgaa gacactcact ggcaagacaa 300
 tcacccttga ggtggagtct tcgggatata ttgacaatgt ccaaggcaaa aattcatgaa 360
 caaggaggca tcccaccgga acagcaacgc ctcatcttcg cccgcaagca actggaa 417

<210> 2758
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F12

<400> 2758

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gtttattatg aacttgagaa tttctatcag aatcaccgca ggtatgtcaa aagtagaagc 120
gataaacagc tgcgttttgg ggcaaaatac acggccgact cgtgcagtcc tgttgagtgg 180
gataataatg gttccccaat tgttccctgc ggcttgattg cctggagctt attcaatgat 240
acatatggtt ttactcgtgg gtccaaggaa ataaagggtca acaggaaaaa catttcatgg 300
aagagcgacc gggagcataa tttggcaaac atgtgtttcc ctccaacttt cagaacggaa 360
ccttgattgg aggggggaaa ctccgaccta ctgtcccg 399

<210> 2759

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F2

<400> 2759

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gatcagaaga tccccctcca ccacgagatg gtcagggttc caacatttcc gtccaaattg 120
ttcttcttct gcgaagtgga gccaaagagt ggcgagaga cgccggttgt accgagccat 180
tatgtctaca agaggatgaa ggagaaattc cctggattcg tggagaaact ggagaaggac 240
atgattgtat atacaaggtt tttaggagag ggcgataacc cgtcctcgtc aatcggtcgt 300
ggatggcaat cgacatttct cactaaagat aaagttgttg ctgaggaaag ggccgcaaag 360
ctcgggataa agctagaatg gaccgacgac agcgtgaaga cggtcatggg ccccatcccc 420
gcggtgaagt ggg 433

<210> 2760

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F3

<400> 2760

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tagcgcccg tctgtcgccc ttcgttcacc tctccttcct ctcgccctg cctgccagg 120
agaggggaag tcagaggcac ggagtggcg agagcagacg cccgtgaacc attgtagctg 180
tccctgtcgt cgtcgtcgtc aacgaacca cacaaggaaa ggatggagaa gaagccgacc 240
atcctcatga acaggtacga gtcgggcg acgctcgggc agggcacctt cgccaagggtg 300
taccacggcc ggaacctcgc gtccggcgag agcgtggcca tcaaggatcat cgacaaggag 360
aaggatgatgc gcgtcggcat gatcgaccag atcaagcgcg agattcccgat catgcgcctc 420
gtccgcaacc caacg 435

<210> 2761
<211> 429
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F4

<400> 2761

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gaccgggacc tgcggggcga ggaggaggag gacacagagg agatggtgaa gctgatcagg 180
gtccgcatgg cgtgctgcga gagcaacgtg gacaaccggg gggagctcaa gaccgccatc 240
gacaggatcg aggagctcaa ggcgaaggag cgcgccgacg aggagcacgc gacggtgatc 300
gaccacgact acagcgatgt tgccctcaac tgatcatcga caccgaaacgg ccgggaatcg 360
atcgatacgg agggttgtgc gcaagctgat gatatgagcc caaaatgtga tgacctgcat 420
gcatgccga 429

<210> 2762
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F5

<400> 2762

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ggcacagccg caccgctcca gcagcctcaa ggatgtccag gtcgccttca gcaacgccga 120

ccacaaggac agcagcagca aggtggaaca gccggcggac agctccttga agccggcgag 180
cctgaacgcg ttcgacatca tctcccactc cagagggttc gacctgtcaa gcctgttcga 240
ggtggaccaa gagcagaagg ccagcaactc gcggttcatg acccagaagc cggcgctcggc 300
gatagtgtca aagctggagc agatcgctga gacagagcgc ttcattggtga aaaaacagga 360
cgggctggtg aagctgcaag ggtccaagca agggaggaag gggc 404

<210> 2763
<211> 405
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F6

<400> 2763

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ggagtccgc cttctgggc cgaatccgaa gacggcatct tcaactccat cctgagggga 120
caggtcgact tcacaagcga cgcgtggccg cgcatttcgc cgagcgcaaa ggacctcgtc 180
aggaagatgc tcacctctga cccaagacg aggatctctg cctacgacgt cctcaaccat 240
ccttgatca aggaagacgg tgaagcgctt gacacgccac tggacaacgc tgtcatgaac 300
aggctcaagc agttcacggc aatgaaccag ttcaagaacg ccgcgctgag ggtcattgcc 360
gggtgcctgt cacaggagga gatcaggggc ctgaaggaga tgttc 405

<210> 2764
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F7

<400> 2764

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ctcgggcccgg aggacctcct cctccacctc ctggaggaaac aagagcagca gcagcttcac 120
cgcgcggtac atccgttgtg cgtcctccgt cgtcgacaca caccaccagc accgtggtga 180
tgatgatgat gacgatggcg atgaagacga cgagtacgac gactgtcgtc taccgtcgtc 240
gcctcctaac aaccacgcta gaagaaacac caccaccact gctgtcatct cggcccagagc 300

cttctccttc cgcgagctag ccgatgccgc aggaaacttc cgccaggaca acctcatcgg 360
agagggaggc ttcggtcgcg tctacaaagc ccgcctgccca actc 404

<210> 2765
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-F8

<400> 2765

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cttcttcttc ctgtccgcag cctgtcggga ggccaatata ggcgacttcg atgaatactg 120
gcagcagctc aagctcatgg ccgacgccgc ggctgatgcc acgtacaagc atgaccgggt 180
cgaggtcgcc aaccaactta accgtgcagt ccacagatcc gtcgagaagg aggacattgg 240
cacgaggcgg gagatgatgg ggacgacgac taggaagtct aagttcagcg ggccgtgcag 300
ggcgacgaac ccgatcgacc ggtgctggcg gtgccggcag gactgggcga cggaccggaa 360
gcgcctggcg cgggtgcgcca aggggttcgg gcgcatacc accggcgggc t 411

<210> 2766
<211> 424
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G2

<400> 2766

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caatatgctc taaaacagct cttgatttga cacatcattg ggaaatgttg gatcaagaga 120
tcgaagccac gatcatgcct cttgtgtatc gctacaagat ttgggtgctt tgcaacgatt 180
gcaacaaggt ctgagagtg aactttcacg tgattggcca caagtgcagc cactgcagat 240
cgtacaacac ccgaacgaca tcgcgccttg cagatttatc gggaagcagc tcaccttcaa 300
cagactcatc cgacaacaac atatagagaa gaaaccattg acagagccaa tatgattgaa 360
gaaccgaagg aggaaatatt gtttcggggc gtgcgtgctt gccaaacttg aagactccca 420
gccg 424

<210> 2767
 <211> 416
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G3

<400> 2767

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atcagacatg gctgcgaagg acggctcagg gtcacaggac caggggcaca ggttgtggcc  120
catgctgtcc tacgcttgcg gcgagctatg tgtgatcatg ctgctctacg tggctgcctt  180
tgcattccat gcagccacaa ggctggcgcg catctgcggg ctcaggccac catgcattct  240
gtgcacgagg ctggaccgcg cctccatgg aaacttgcca tggttctccg cggacctggg  300
ctgttccgtg catcgggtccg aggtctcgtc tctgggtcac tgcaagagcc atggccggct  360
tgcacgggtc ggcatctct gcaaatcatg cctcctttca tgcacggcgg taggtg    416
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<210> 2768
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G4

<400> 2768

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catgcgcctc gtccgccacc ccaacgtcgt gcagctgcac gaggtgatgg ccagcaagag  120
caagatatac ttcccatgg agtacgtccg gggcggcgag ctcttcgccc gcgtcgcccc  180
cggccggctc aaggaggacg ccgcgagaag gtacttccac cagctcgtcg gcgccgtcga  240
cttctgccac agccgcggcg tctaccaccg cgacctcaag cccgagaacc tctcgtcga  300
cgagcacggc aacctcaagg tctccgactt cggcctcagc gcgtcaggg agtgccagaa  360
gcaggacggc ctgctgcaca ccacctgcgg cccccgcg tacgtcgcgc cggagatcat  420
caacaagaag ggctacga                                438
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<210> 2769
 <211> 402
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-G5

<400> 2769

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ttccccctct ctgcgagttc tcggtccac tgtaccggag ctccaccacg gcctccggaa 120

agaaacagat gaaagacagc gacggcgagg gcaccggcgg tggcgtcgcc cgctcgcacc 180

cctccaatct cccgcttccg actccacagt ccgacccgaa cctccagttc tcgggtggga 240

cggacgatga gtccctcgagc cggaatagca gtcctctctg caccggcggc gcgagccccg 300

ggtactactc ggactaccgc tctagcttca gcggcgagtg ttcgccgtac aacatgtcnc 360

cctggaacca gaccatggcg ttcccctggc cgcaacacaa cg 402

<210> 2770

<211> 414

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-G6

<400> 2770

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tctacaacga gtcgcgctg gtcctcgagg agcaccctgt cctcctcacc gaggcgcccc 180

tgaaccccaa ggctaacagg gagaagatga ccagatcat gttcgagacc ttcaacaccc 240

ccgctatgta cgtcgccatc caggccgtgc tctctctgta tgccagtggc cgtaccacag 300

gtatcggtgt cgactcggga gatgggtgtga gccacaccgt ccccatctac gagggatagc 360

ccctcnccca cgccatcctt cgccttgatc tggccgggtc cgacctcacc gact 414

<210> 2771

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-G7

<400> 2771

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cgccccgcgt ccttggtgcg gcgccggccg ccgcgaacgc gcccgggcgg gcgttcagca 120

actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 180

ggggcaagga gccctggac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 240

tgggtggaccc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 300

cggtgagcaa caccaagcgc gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga 360

agctgttcct gaacatcagc aagccgttca tcacgttcc 399

<210> 2772

<211> 409

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-G9

<400> 2772

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accctgtccg tgcaccagct ggtggagaac gccgacgagt gcatggctct tgacaacgag 120

gcgctctatg atatttgctt ccgcaccctc aagctcacca acccttcatt tggcgacctg 180

aaccatctga tctcggcgac catgagcggc gtgacgtgct gcctgcgggt cccggggccag 240

ctgaactcgg acctccgcaa gctggcgggtg aacctgatcn cgttcncgcg gctgcacttc 300

ttcatggtgg ggttcgcgcc gctgacgtcg cgcgggtcgc agcagtaccg cgcgctgacg 360

gtgccggagc tgacgcagca gatgtgggat gccagaaca tgatgtgcg 409

<210> 2773

<211> 422

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-017-Q1-E1-H1

<400> 2773

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gtttacacgg ggaagcggct gcacgcggcc ttgttcttcg tgatgggatt ctggctgctg 120
gacttttcca acaacacggt gcagggcccc gcacgcgcgc tgatggcgga cctcgcaggc 180
agccacggac ccagcacggc gaacgccatc ttcgtgtcgt ggatggcgat cgggaacatc 240
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agggcattgct gcgaggcgtg cgccaacctc aaggccgcct tcttggtgtc ggtggtgttc 360
ctgngcctgt ccacggtggg gaccatgatc ttcgcccgcg aggtgccgct ggaaccggcg 420
gc 422

<210> 2774
<211> 432
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-017-Q1-E1-H2
<400> 2774

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aaggcctttt tttttttgag ataacaagga ggagaggagg agatggcggg cacgatcacc 120
tgggtgaagg cgaggcagat cttcgacagc cgcggaacc ccaccgtcga ggtggacgtg 180
ggcctcagcg acggcagcta cgcgaggggg gccgtacca gcggcgcac cactggaata 240
tatgaggcct tggagttgag ggatggagga tctgattatc ttggcaaggg tgttcttaag 300
gctgtcagca acgtaaaca cattattgga ccagcgattg ttggaaagga cccactgag 360
caggttgaga ttgacaactt catggtccaa cagcttgatg gaacctcaa tgaatggggc 420
tggtgcaaac ag 432

<210> 2775
<211> 442
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-017-Q1-E1-H4
<400> 2775

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ctccctctcc ctctccgatc cattctccag cgcagcgaag taaacatgtc tgaccgggca 120

aagatgtcgt ggcaggcgta cgtggacgag cacctgatgt gcgagatcga gggccaccac 180
 ctcgcgccgg cgcccatcgt cggccacgac ggtgccgcct gggcgagag cacggcgctc 240
 cccgagttca agaccgagga catggccaac atcatgaagg acttcgacga gccagggcac 300
 ctcgcgccga caggcctggt cctcggacct accaagtaca tggatcatcca aggcgagcct 360
 ggtgccgtca tccgtggcaa gaagggatca ggaggcatca ccgtgaagaa gacagggcag 420
 gcactcgtgg ttggcatcta cg 442

<210> 2776
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H5

<400> 2776

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 cgacatccac aggggggagg ggaaaacacg tgcattcacc cggcggaat aatggcctcg 120
 gttccggctc cggcgacgac gaccgccgcc gtaatcctat gcctatgctg cgtcctctcc 180
 tgtgccggcg ctgacgaccc caacctcccc gactacgtca tccagggccg cgtgtactgc 240
 gacacctgcc gcgccggggt cgtgaccaac gtcaccgagt acatcgcggg cgccaagggtg 300
 aggctggagt gcaggcactt cggcaccggc aagctcgagc gcgccatcga cggggtcacc 360
 gacgcgaccg gcacctacac gatcgagctc aaagacagcc acgaggagga catc 414

<210> 2777
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-017-Q1-E1-H6

<400> 2777

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 caaggagaag tacgagccgc tgtggatcaa aggcgggtggg cattgcaacc tggagacgta 180
 cccggagtac atcaggcacc tgcgcaagtt cataaacgcc atggagaagc tggcaaagga 240

cagcaaggcg gccagggcgc cgccgccgtc gagcatggcc gacgaagtaa gacgcaccaa 300
 gtgcttgaga ttccggaaga gatgaggctg gcggcgaggc catgcgggtc tcggccgtct 360
 ttagctgcgt acgccagtca ctaaccccct gctgcattgc attgcattgc ttgctgctg 420
 cacgtgc 427

<210> 2778
 <211> 416
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-017-Q1-E1-H7

<400> 2778

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 cggattggta ggccctcttga aagttcgcgt ggtccgggggt atcaaccttg cctaccgcga 120
 cgcaagaggc agcgatccgt atgtcgtcct acggcttggc aagaagacaa gcgtgaagaa 180
 gagatccgtg aaccccatat ggcaagagga gctaactctg accgtcacag atcccagcca 240
 accactgaag ctggaggtgt tcgacaagga caccttcagc agagacgacc ccatgggaga 300
 cgcgagggtg gacgtggcgc cactgatgga ggcggtgagc atgaaccgcg gggaggagag 360
 tctgangaac ggcgccatca tcaggtccga gcggccgagc gccaggaact gcctcg 416

<210> 2779
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A1

<400> 2779

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 ggatcggctg gggcgctcgg cgctcgtgggc accgactcgg cgaccatcgc gctgcccggc 120
 ggcaaggtgg cgcagctgca agacgtggtc ctgggttgct cctccacgca tgatggccag 180
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 cgcgcgcccg cgcgcttcgg tggtagcttc tctactgcc tcgtcgacca cctcgccccg 300
 cgcaacgcca ccgggtacct tgccttcggc ccagggcagg tgccccggac cccggcgacg 360

cagacgaagc tgttcctgga ccccgcatg cccttcta

398

<210> 2780

<211> 343

<212> DNA

<213> Zea mays

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<400> 2780

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gcctcctcgt agtagaatag ttctatctca ccgcaacatc tcctcattac atcctttatg 120
agaggctgat cgattggtag atacgtactc ggggtggagca gagcaacgag agacatggcg 180
acgacgacgc gtgttgccgc cgccgccacc ggcgtgctgc tggtcctgtc ggcgttggcg 240
accctgtcgc gggccgagga cccgtacctg ttcttcgagt ggaagggtgac gtacgggaac 300
aagtccctgc tgggctgccc ccagaaggctc atctcatca acg 343

<210> 2781

<211> 469

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-A12

<400> 2781

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tttccggtgg aggatccggt ggcgtcgatg ctggtgtctc cggaggcgcc aaagttgacg 120
gcaacattgg aggaaaagcg ggagggagtg gaaatgcata tactggagct gatgcaggta 180
caagtgtttc aggtggagga tccggtggcg ccagtgcagg taccagtgtc accgtgggtg 240
ctggtgtctc cggagggtgcc aaagttgggtg gtggcgtagg aggaaatgca ggaggaagtg 300
gcaacgtcta tactggaacc ggtgccgatg caggcgtttc tgggtggagga tccggtggcg 360
ccgacggtgg tattggacct aacatagggtg ctggtgtctt cggaggcgtc aaatttgggtg 420
gcggcccccg aggaattgta ggaggaattg gcagtgtctc tgcaggtgc 469

<210> 2782

<211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-A2

 <400> 2782

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 ccaccacctc acgtcggcag gcatcgtcgg ccacgacggc gccacctggg ctgagagcac 120
 cgcattcccc gagttcaagc ccgaggagat ggctgccatc atgaaggatt tgcacgagcc 180
 ggggcacctc gccccgaccg gcctgatact gggaggcacc aagtacatgg tcatccaagg 240
 cgaacctgga gctgtcatcc gtggcaagaa gggatccggg ggcatactg tgaagaaaac 300
 agggcagtca ctcatcattg gcatctacga cgagcccatg actcccgggc agtgcaacct 360
 ggtggtggaa aggctgggcg actacctgct cgaacagggg a 401

<210> 2783
 <211> 434
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-A3

 <400> 2783

 ttcccgggta cgacccacgc gtccgcgcgt gcgtacatta atctaagcga tcttcatcca 60
 gccttctgct ctgctccctc gaaatggagg cgacgagcaa ggcgatggct tcaggcctcc 120
 tcgttctgct gcttctcatc aacacaggct ttgtcctgcc cgtccattcc gaggactgct 180
 gggccgacac ccgcgtcatc tgcaccaaga cgcacaactg ccgggacgac acttgcgcg 240
 ggcgcggcat gccggacggc cgctgccact gggagttccc caacctgggtg cccttctgcc 300
 agtgctgcg ccccaactgc cactagtccg ggcgcctcgg attggctcac ttcgccggcg 360
 atgatggatg gtgcccact gcgactgcc agtctgctcc attcgttgtt gtttaaggca 420
 taatatataa actg 434

<210> 2784
 <211> 416
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A4

<400> 2784

cggtgcagaa ttcacgggac gacccacgcg tccgagtcgc tgcagcagaa cgcgcggtgc 60
cagcccacgc tgggtggtcga gctggcgctc ccgacgcacg cgctgctccg cgagctcggc 120
gcccacgcgg gcgcgcgcat cgtgctggag gtcgagaagc gcgccgagca gggcaccacc 180
gacggcaacg aggccatcgc caccaccgac cagcagcggg gggtgctgga ggagctcatg 240
tggaccatgt tctgcaacgg caagaggggtg ggctacgcgg tgcggcgagg cccacccgag 300
gaggacatcg ccgtgctgga gacgctgtgg gccgtctcca tgggcggcgg cgctgctccc 360
ggtacgtcgg acatggacgg ccccgacggc gagatggggg acatgcgccg gagctt 416

<210> 2785

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A5

<400> 2785

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tcatatacct agcagtgtct ctgcatagaa agataaaaagg taggaggagg cgagtgcggt 120
ggtgggatta tttgtgagga gatattggag ttattatata tatatatata ggtagacgat 180
agatagacag ctagatctat ataaccatgg tggatggggt ccgatggatc agaccgggct 240
ctttcgtcct gtacttggtc ttcttcttcc tgtccgcagc cctgtcggag gccaatatcg 300
gcgacttcga tgaatactgg cagcagcgca agctcatggc cgacgccgcg gctgaggcca 360
cgtacaagca tgaccgggtc gaggtcgcca accaacttaa ccgtgcagtc cacagatccg 420
tcgagaagga tgacattggc accagg 446

<210> 2786

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A6

<400> 2786

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aatacatcgc tagctcgcca ccaacaatgg cctcaaggta ctctatcctg cttgccacaa 120
cggcactggc tatgttggtc gcattcggtt cgtgcaccac cccactcacc ttccaggtcg 180
gcaagggctc caagcctggc cacctgggtc tcacccctaa cattgccacc atctctgacg 240
tggagatcaa ggagcatggc ggcgacgatt tctcctttac actcaaggag ggcccagctg 300
gcacttggac gctcgacacc aaggccccgc tcaagtaccc cctctgcacg cgctttgcta 360
ccaagtctgg cggtaccgt atcgccgatg atgtcatccc cgccgatttc 410

<210> 2787
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A7

<400> 2787

taccggtcta gaattcccgg gccgaccac gcgtccaatc ccacaccacc accacctcct 60
ccggtcccca acccctgtcg caccgcagcc gccggccatg gcctgcctca ccgacctcgt 120
caacctcaac ctctcggaca acaccgagaa gatcatcgcg gaatacatat ggatcgggtg 180
atctggcatg gatctcagga gcaaagcaag gaccctctcc ggcccgggtga ccgatcccag 240
caagctgccc aagtggaact acgacggctc cagcacgggc caggcccccg gcgaggacag 300
cgaggctcatc ctgtaccgc aggccatctt caaggacca ttcaggaggg gcaacaacat 360
ccttgtgatg tgcgattgct acaccccagc cggcgagcca atccccacca acaagaagta 420
caacgccgcc aagatcttca gcagccctg 449

<210> 2788
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-A8

<400> 2788

ccacgcgtcc gccacgcgt ccgcccacgc gtccgccac gcgtccgcc accgcgtccgt 60
tttatcaacg cttctcctgc tggttactcc gcgcgccttc tctttctctc ccggacgtcg 120

atcgtgttct tcagcacggg ctagctagct cctccctcc cagccatggc gacgccggac 180
aacaaggggc acgggcatcc gctgcccagg tttggggagt gggacgtgaa gaatccggcc 240
acgtccgagg gcttcaccgt catattccag aaggcccgcg acgacaagaa gaccaccacc 300
ggccctgggg ctgggaacgc gcgcgcaggc attccgccgg ccttcaggaa cggcggcggc 360
gacggcgggt acaggcccgga cttcggcgac ggcaaccagt acacgccggc caaacgggaa 420
aaagtgg 427

<210> 2789
<211> 431
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-A9

<400> 2789
ccacgcgtcc gggaggaggc catcttcctg aaggaagact atgctgatgc gcactgtgac 60
cttgggtcgg ccttgcagtc agtangggag gatgaccgtg ctatccagga gtttcagaca 120
gcaattgatc tcaaacctgg ccatgttgat gccttgatca atcttggtgg attgaacatg 180
gatgctggcc gcttcgtacg ggctgcagag atgtatactc gtgtgctgag catccgacca 240
aaccattggc gtgcgcagct aaacaaggca gtggccttgc ttgggcaggg tgaatccgag 300
gaggctaaga aggcaactca ggaggcggtt aagatgacac agagggtgga agtgtatgat 360
gctatctcac atttgaagac attgcaaaag aagaagctaa agccttccaa aggaaaaaat 420
gatggtcaag g 431

<210> 2790
<211> 450
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-B1

<400> 2790
attcncgggt agaccacgc gtccgataaa taaagcagct cctccggggg cggcgaacta 60
ctcctcgtcg ccaaaaccct agccctgctt ctttgccatg gcgagcagcg ctagccaggc 120

gagcctcctg ctccagaagc agctcaagga tcttgcaag aaccccgagg atgggttctc 180
cgccgggctt gtagacgaca gcaacatctt cgagtggcag gtcaccatca tcggaccgcc 240
tgacacccta tatgatggag gctacttcaa tgcaataatg accttcccc agaactatcc 300
caacagcccg ccatcagtaa gatttacttc tgagatgtgg catccgaatg tttatcctga 360
tggacgtgtt tgcatttcta ttcttcatcc acctgggtgaa gatcccaatg gttatgagct 420
tgcaagcgaa cgatgggaca cagtgcacac 450

<210> 2791
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B10

<400> 2791

ggtccggaat tccgggtcga cccacgcgtc agggcgagag tgcgtgcgtg cagccacagg 60
caggcgtcgg caccatgtct tctttcaccg gcacgcagga caagtgcgcg gagtgcgaca 120
agaccgtcca cttcatcgac ctcttcacgg ccgacggcgt cacctaccat aagacatgct 180
tcaagtgcag ccaactgcaaa gggatcctct cgatgtgcag ctactcttcc atggacgggtg 240
tgctgtactg caagaccacac ttcgagcagc tcttcaagga gaccggggagc ttctccaaga 300
acttcacgcc aggtggcaag tcttcagaca aggtgaact gacaagggcc cccagcaagc 360
tatcatctgc gttttctggt actcaggata agtgtgcagc ttgccagaaa acagtgtg 418

<210> 2792
<211> 455
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B11

<400> 2792

ccggtccgga attccggggc gaccacgcg tcagggaata tggtacaatg gttaaaggtc 60
ggaggccata ttttctttag agaactatgt tttcaccaat ctggagattc caaaaggaag 120
gtgaacccaa cacactatcg agaaccaagg ttttatacca aggtatttaa agagggccat 180
tcatttgatc aagatggagg ttcgtttgaa ctttctctag tgacctgtaa atgcattggg 240

gcttatgtca aaaacaagaa gaatcaaaac cagatatgct ggttatggga aaaggtaaaa 300
tcaacagaag acagagattt tcaaagattc ctggacaacg tgcaatacaa aacaagtggg 360
atattacgtt acgaacgtgt ctttggtgaa ggttttgtga gcactggtgg aatccagaca 420
acaaaagaaa ttgtgggcat gctcgatctt aaacc 455

<210> 2793
<211> 464
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-018-Q1-E1-B12
<400> 2793

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gaggcaaaga agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa gaagatccag 120
gacgacttct gctcgacgct gtgcgagggc aagaagggga cggacctggt cgtgtgcaag 180
gagtctcgcg cgctctccca gcagtcacac ctggtgctgt acggcaggat ccagtgcagg 240
ggcaagtgcg ccgagcagaa gggcatcacg gcgccggcca tgaaggtctg ccaggaggag 300
tgcgacaagg cgtacgtggt gaaggcggcc gaggtcacca aggctgcag cgtcacctgc 360
gccaaggaga agaaccgcgc ctcagcgaga actgcaagag gtctctgcacc cctcctcctt 420
cttgaagcga aacccttga aatgaatgaa ccatgcatgc atgc 464

<210> 2794
<211> 483
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-B2
<400> 2794

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acaaggatgat aggtacatgg agttggctca ccgagttgac gaagctttgg ggttcatgtc 120
agctgctggg ctcccttttag atcacctat aatgacaaca gcagaatctt ggacgtcaca 180
tgagtgtctt ctctacctt atgagcaagc gctcactcgt gaggattcca ccacgggcct 240
ctattatgac tgctctgccc acttcctatg ggtcggagag cgcactcgcc agcttgatgg 300

tgctcacgtt gagttccttc gaggcattgc caaccctctt ggtatcaagg ttagtgacaa 360
 gatggacca gcagaacttg tgcggttgat tgatatattg aatccccgaaa acagggctgg 420
 gagaataacc atcatcacia gaatgggacc tgaatacatg aggggtgaaac ttccacacct 480
 gat 483

<210> 2795
 <211> 439
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-B3

<400> 2795

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 gaaccatgtg gtcgtcgatg cgggcacatg ttgcgatggc tgtggcggtg gtgttcttgg 120
 tgagcggcgc atggtgcggt cctcccaaag tccccccagg caagaacatc acggccacct 180
 atggcaagga ctggttggac gctaaagcga catggtatgg caagccgacg ggtgccggtc 240
 ccgacgacaa cgggtggcggc tgcgggtaca aggacgtgaa caagcccccc ttcaatagca 300
 tgggcgcatg cggcaacatc cccatcttca aggatgggtc ggggttggtg tctgtcttcg 360
 agatcaagtg cgataagcct gtggagtgc cgggcaagcc cgtggtggtg cacatcacgg 420
 acatgaacta tgagcctat 439

<210> 2796
 <211> 452
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-B4

<400> 2796

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 ggcgacggct gggcgaccgc cacttccgcc ttctcttct actgagcgtc tccaggcagc 120
 cttctgaatt cggagttgcc agcattcgct cgaggtgccg gaccagatct caccatcatg 180
 caggctagcg atagattcaa cataaactct cagcttgagc atcttcaagc caaatatgtt 240

ggtacagggc atgctgattt gtctagattt gaatgggctg taaacatcca gagagacagc 300
tatgcctctt atattgggca ctatccaatg ctagcatatt ttgccattgc tgagaatgaa 360
tcgatcggaa gagaacgtta caatttcatg cagaaaatgc tgcttccttg tggcctccct 420
cctgagagag atgaagattg aagagctggt gc 452

<210> 2797
<211> 253
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B5

<400> 2797

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tatacatata gcacatttgt ttcggtttgt tgatgcgcgc atgcatgcta gcagacatct 120
ttcctaaaaa aatttaaata atttccatct cgcattattt tagtagctac cattcatggt 180
ttctgagtag ttgtataaat gctaccaccg tcctcttttg taccggcgcc gaacaaacga 240
aaaacacact atc 253

<210> 2798
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B6

<400> 2798

ccacgcgtcc gcaagttctt ccacatgaac atgtaccggt gcaaggacat gctaatacaag 60
gacgtgaccg tgacggcgcc cggggacagc cccaacacgg atggcatcca catgggcgac 120
tcctccggga tcacgatcac caacaccgtc attggcgctc ggcacgactg catctccatc 180
ggccccggga cctccaaggt gaacatcacc ggcgtgacct gcggccctgg ccacggcatc 240
agcatcggca gcctagggcg gtacaaggac gagaaggacg tcacggacat caacgtcaag 300
gattgcactc ttaagaagac gatgttcggc gtccgcatca aggcgtacga ggacgccgcc 360
tccgtgctca ccgtctccaa gatccactac gagaatatcc agatggaaga ctcaaccaac 420
cccat 425

<210> 2799
 <211> 444
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B7

<400> 2799

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 acttcgagggc cgggaacaag ggcacgtgt cttctcgtg ggtggacgag tcgcgcctgc 120
 ggttcgcgcc cgaggaccgc atccgccct tcttcgagac cctcaactac tggggcatcc 180
 agcgggaagcg cacgcgcac agctgcgacg cctgcggcca cctgcttggc cacgtctacg 240
 acgacgggtcc gccggccatg cagggcaccg gccagttcgg gatggggccc agccagggtca 300
 tcccgcgccg ccccaggtag cgcttcaaga tcaaggccat cgccgccagc tcctcggcac 360
 ctgccgccgc cgcctatgaa aagtgatgct ccatagattt cttcatctgg ttgcgtgtcc 420
 tgtgtgctgt cagtgtgtg gtcc 444

<210> 2800
 <211> 366
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-B8

<400> 2800

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 acgtgtcggc cgaggtgggc atgaccgtgg ccgcgttcgc gcaccacgag ctcaacgccca 120
 tcaaggacga cgacgtcctg tacaagtgca tcgacacctg ctccgaggac atcgaggaag 180
 ccgtggcgca cctcagcgcc ctctctcgcg acttctccga cgccaggttc ctcgagggtca 240
 agtcctggct cacctccacg ctcggcggca ccgccacctg cgaggacgcc tgcaatgacg 300
 caccgcgcag cgacatcaag aacgtctgca gaaccaagag cttcgagttt gagaagctgc 360
 tgcgcg 366

<210> 2801
 <211> 336

<212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-C1

 <400> 2801

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 agtccagtag gccagaagt acgtgcagga ctccaagaac acgacggaca agactatggt 120
 gccgcccacc gtgtacccac cgccgcaggc catggcggtcc gcatacccg cgaacaata 180
 ttgttcgccc tacgcggggt acccggggca gccttacggg taccctgctc cgccaccgta 240
 cgggtacaat gctgcttccc cacaaccggc gatgtacaac tacgcagcac agccggtagc 300
 tgcaccggcg aggcattggcg gaggtatggg gatggg 336

<210> 2802
 <211> 501
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-C10

 <400> 2802

 taccgggtccg gtatgcgcgg gtcgaccac gcgtccggct tgactccagc aaacagcctg 60
 atcaagaatt ccttggtcag gtttcagctg tctcaagatt gaagcatgag aatgttgtcc 120
 aactcgtcgg atactgcgcc gaagggagca cccgcgtcct tgcttatgag tatgcaacta 180
 ggggatcatt gcatgatatc ctccatggta aaaaggggtgt caaaggagcc cagccagggc 240
 cagtcctgtc atggatgcag cgagctagga ttgccgtatg tgctgctcgg ggtctcgagt 300
 tcctccacga gaaggccgat cctcgagtgg tccaccgca catcaagtca agcaacatac 360
 tgctctttga ccatgatgtt gcgaagatcg gggacttcga catctcaaac caggccccctg 420
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 aatatgccat gactggacag c 501

<210> 2803
 <211> 220
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-C2

<400> 2803

gggacgaccc acgcgtccgc gacgacggcg tgttgatcga gggcctcggc tcctccagct 60
gcgacgggtca cgatgggtgtt aagatttcgt gccgaaatgt gatatgtttc atgctcgatc 120
aagtaattta ttcctaattct gtgtgctgcg caaaagaaaag aaaaacttcg aagtgttgcg 180
ctactcgcta gtatgaatta attcgttttt ccctttaaaa 220

<210> 2804

<211> 438

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-C3

<400> 2804

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ctgtctgctc tcttgaattct tctttttgta aagcgtacac cacgtaggca ggatgtaaca 120
acaacattca aggagttatc ttgactgaga tgcagatttt cagcagcaat gcagcatgaa 180
gtcgagctaa ctgttccaca caaactactc agcaaaagggt catgggagag gtctcaagca 240
gggtgaccct cctcctcctc ctccccctct ttttgttctg gcgattgacc cactacaaaa 300
aaaatctaaa gattgctaca gagaccggag tactgagcan atcggggagc tgttcgcccc 360
ctataaggat ctcgatgtat acacatgatg cgaccttggt tgttaagccc aaaaaagaag 420
aaattgagag aattgtnt 438

<210> 2805

<211> 100

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-C4

<400> 2805

attcncggga cgaccacgc gtccgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60
aaaaaaaaag ttctagatca cgagcggccg ctctagagga 100

<210> 2806
 <211> 415
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-G9

 <400> 2806

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 cgcctcttct tcctcgcttc cgttcgcgtc cgttcgcgtc cgcgccgcgc cgcgccgcga 120
 ttcagggatg gagatgaaga agatcgcttg cgcgcgtctc gtcgccgcct cggcggccac 180
 cgtggcgctc gccgcggagg ctccggctcc gggccccacc agcggctcct ccgcgcgtcg 240
 gccgcgcgtc ggcgcgcgcc tcggggccgc cgtcgctctc ttcttcgcct actacattca 300
 gtgagccggc cgcggccggt cgcgcggagg ccgaggaaga gacgaagcgg gagagagagt 360
 gacatggctg cgcgcattcc gatgcgtggg catgtttttg attcgacaca ccttt 415

<210> 2807
 <211> 390
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-022-Q1-E1-H1

 <400> 2807

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 cgcctcatcg ccatggcacg ctctgtcccc atcgcgctc tgctcatgct caccctctc 120
 ctctctctcg tctccactgc gtcagctgca cggaccgtgg gcgacaccgt gcaggacacg 180
 tgcaacatca cagtattcct caggatctgc atggacagcc tcaccgcaca gccatagagc 240
 cagaaggcta tcccgctccg gatggcataa ctgttcgtga acatcgcggc cgagaaggga 300
 tgctggattg ccacgttcgt gcacgggaag tatatcaatg ccatggacag caccgtgttc 360
 aagtgtacg acagctgctc ggatgacgtc 390

<210> 2808
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H10

<400> 2808

ccacgcgtcc acggtatcaa catcattgcg ctcgtagtcg gtgtgtcccg cgccgtgtac 60
gcgagatcc cgcagtacag caagcttctg ggcggcgggt tcttcagctt ctgggtgctg 120
gcgactact acccgttcgc caaggggctc atgggtcgcc gcggacgcac gccgaccctc 180
gtctacgtct gggcgggact tatctccatc accgtctccc tgctttggat caccatcagc 240
ccgcccgcgc acaggatcac ccagggcggc gtcgatgtgt gatcatccaa gcttcaccaa 300
cgagagatta ccaaacaag aatagctgaa attttctgga cgatttgcct agtttttgta 360
ctgaacacta tgtctactta cgcgtactaa ttaattactg accaatagtg tctat 415

<210> 2809

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H11

<400> 2809

taccggtctg agtccccggg tcgaccagcc ttcgaggagc catccgggag tacacgcatt 60
acagcgagta caagaactgg gtgtggaagt cgcaggacga cctgttcttc aacggcgcct 120
tcttcaacca gtccggcggc cagaacgagc gcatgtacga caggctcgac ctcatccagg 180
ccaagggcgg ccagtacgcc gagtcgctca ccatgtacgc cggcgcgctc aactgccgcg 240
tcggcaggaa gtgctagtgc gtgtgcagct ctaggetgca gctttcatca ttggcgatcg 300
atcgtaacaa tgcaaagttg tgttgatat aactcttggt tttggaatgc cgcccgtaat 360
taatgggtcaa ctctaact gcttgccttt gcttgccggc cagcaaaaag aaggctcgag 420
caacgga 427

<210> 2810

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H2

<400> 2810

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 gacggcgccg cccgcgcgcc gaggtgctgc gctagcgcta cggcgtgcaa gagcaagcag 120
 gcgtccaagc cgtgctgcgc gacgggtgaag ccggtggcga cgacgaggca caggcacggg 180
 cacgggcacg ggcacgggca cgcaggcgcg gggaagcccg ggacgctagg aggcgacaag 240
 cagggtaaag actgccatgg ttgctgccag aaggagagca agccgcccga ggacgccgtc 300
 gtgatcgcca ttccgggacg ggccgtggag caccggaagg aggccttccc tcacgagaac 360
 gcgggagccg gggggtgctg cgctgcagcg cacggtgccg aagacgaggt atgcattgtc 420
 atcagccgc 429

<210> 2811
 <211> 433
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-022-Q1-E1-H4
 <400> 2811

cgggtcgacc cacgcgtccg cggacgcgtg gggaacgcca aggtggcggt cgagctgtcg 60
 gagcggctgc cgcacctgcc gctgcggatg caggagcact cgcgcgcgcg gctggcggtc 120
 gccgagcgga tgcaggggct gggcctgcgc gtgctgtacc cgggcctccc gggccacccg 180
 caccacgcgc gcctggccgc catgggcaac cggggctacg gctgcggcgg catgctgtgc 240
 ctcgacatgg gcaccgagga gcgcgccaac cgcctcatgc accacctcca gaacaccacc 300
 cagttcggcc tcatggccgt cagcctcggc tactacgaga cgctcatgtc ctgctccggg 360
 cagcagcaca gcagcgagat gccgcccag gaacgcgcgc gcgcgggcat ctccccgggg 420
 cctcgtccgc atg 433

<210> 2812
 <211> 418
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-022-Q1-E1-H5
 <400> 2812

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ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat caccaccgcc cagcaataat 120
 ggcgcagagc atgaggattg tggcgctggc cttggtggcc ctgctggtgg tggcggcggc 180
 ggcgcccgtg gccaccgcgt acggctgcta cgactactgc tacgagcgct gcgccaacgg 240
 caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca cggaccacgg 300
 cgccggtgcc gccggcgccg cgccggcttg atcgcccage gcattcatcg cttcagctcg 360
 atataatcgc tgctccgtca gcaaccaca tatgattcga ttaatccttc tcctctaa 418

<210> 2813
 <211> 404
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H7

<400> 2813

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 tgaccggcgt ccgcgccggg gactggcgt gtcctctccg agaccgagcg tcgcgcgcct 120
 atgccgccgg ccggacctgc gcctgcgccc gcaccgtgcc gccgccgagc gcggtcgtgc 180
 cgaggagcgc tcgcgccctg tccacgccgg ctgggcccgtg gccgagccac caggatcgct 240
 ccagccgagg agccgcgccc gtggaggacc gccgtggtcc gtcggggctc gccgaggccg 300
 accggccggt gccagccgc gccggggcca gccgcgcca cgagccggtg gccagccgcg 360
 cccgcgcgcc ggtggctgga tgcgccaggc tgctgcggcc agcg 404

<210> 2814
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H8

<400> 2814

ccacgcgtcc gctaattttc atttcaagga agacaactgt gtaattaaga gaaggaacgg 60
 gacaagatgt tctttcagag gaagaaatca aagaaagcca aagactccag aggatcgag 120
 aagaagggga aagatgggcg tgggaagaat gatcttttcg atcgtgccaa gggagggctt 180
 gatgccctcg caggaagcct gcaggaagcc aagaaggacg ccgaaacggc gactgagaag 240

cttcaagggg atgtgaagtc gggcatggaa acgatccggc acaagggctc aggcctcctt 300
gagaaagcca aagaagaact cgggagtcac tccgacgcca gccgttcctc aaaggaacta 360
gagcgaggaa gcgaggaaca ggggaacaac aaggacatgg acgctttcag tgc 413

<210> 2815
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-022-Q1-E1-H9

<400> 2815

ccacgcgtcc gcggcgactt cgatgaatac tggcagcagc gcaagctcat ggccgacgcc 60
gcggctgagg ccacgtacaa gcatgacccg gtcgaggtcg ccaaccaact taaccgtgca 120
gtccacagat ccgtcgagaa ggaggacatt ggcacgaggc gggagatgat ggggacgacg 180
acgaggaagt ctaagttcag cgggccgtgc agggcgacga acccgatcga ccggtgctgg 240
cgggtgccggc aggactgggc gacggaccgg aagcgcttgg cgcggtgcgc caaggggttc 300
gggcgcaaca ccaccggcgg gctggccggc aagttctacg tggtgacgga cggcaccgac 360
gacgacgtgg tgaacccgcg ccccggcacg ctccggtggg gcgtcatcca gatcg 415

<210> 2816
<211> 400
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A10

<400> 2816

ggtcgacca cgcgaccgag gacgcgtggg cggacgcgtg ggcggacgcg tgggtgagaa 60
tgttgtccaa ctctcgcat actgcgccga agggagcacc cgcgtccttg cttatgagta 120
tgcaactagg ggatcattgc atgatatcct ccattgtaaa aagggtgtca aaggagccca 180
gccagggcca gtctgtcat ggatgcagcg agctaggatt gccgtatgtg ctgctcgggg 240
tctcgagttc ctccacgaga aggccgatcc tcgagtggc caccgcgaca tcaagtcaag 300
caacatactg ctctttgacc atgatgttgc gaagatcggg gacttcgaca tctcaaacca 360
agccccctga aaatgctgcg cggcctcaac tctactcgcg 400

<210> 2817
<211> 372
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A11

<400> 2817

cccacgcgtc cgacgacaac tgccgcgccg ggttcgagac aaacgtgtcc cagcccatcc 60
aaggcgcgac ggtggagatg gagtgccgcc acttcgagtc gcagcaggtc cagacaagg 120
cggaggcgac gacgggcccc ggccggtggt acaggatgga gatcagcggc gaccaccagg 180
acgagatctg cgacgtgcgc ctgctcaaga gccccgagge ggactgcgcc gagatcgacc 240
actcccgcga ccgctgcgcg gtcccgtca cccgcaacga cggcatcaag cagagcggcg 300
tccgctacgc caaccccatc gccttcctcc gcaaggagcc gtcceccaac tgccgcgagc 360
tgctccgcgc ct 372

<210> 2818
<211> 424
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A12

<400> 2818

gtcgaccac gcaaccgact ggttcgtgga tggctgcgcc acgacctctc ctgctgtcgc 60
tgctggtcgc cgtgctagcg gtggccgccg atgtcgccaa cgccggccac gccaagcccc 120
tgacgcctgg cgggcgtgtg gtacacgaca accacggcaa gttcacggcc gggccgtgga 180
aaccgcacca cgcgaccttc tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt 240
gcgggtacaa ggacacgcgc acgcaggggt acggcgtgca gacggtggcc gtgagcacgg 300
tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga ggtgcggtgc gtggacagcc 360
ctagcgggtg caagcccgac gcggcggcac tgggtggtgac ggtgacggac ctgtgccccg 420
ccaa 424

<210> 2819
<211> 239
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A5

<400> 2819

ttcgcggggcc gacccaacgcg tccgtttgaa ttcccttcga ttcattccggc acagcgggct 60

atggaccttc agcagcaagc taattaagtt ggcagcatgc accgctaacc ttatatacta 120

ctgagacttc caaattctag tatatgtaat ccttttgttc gggttcatga tcgaattcca 180

aagagtggaa aacaagcaaa aggttaaata tacatgccat ttttggaggc atttttaaa 239

<210> 2820

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A6

<400> 2820

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tcaccggggc gggctcagca tcctttcgaa gaagtaacac ttctccgtga ggctgagcc 120

cctcgccgcy gtgagccaag ccggcgacgc tcgccccggg gctcacgctc accaccgagc 180

cccaaccaat taataatatg tatatacagc taggatcgat cgtcagtaaa atggcaggct 240

ccgccgtcct gaggagcccc ctgtccgtcc tcctctacat cctcgccgcc gtgcccgcca 300

ccgccgcggc gacaccgacc gacgccgcca tcgacaaggc gtacgcacat ctctgtaacc 360

tcacggccaa gcactagtac tgggcggagc gcg 393

<210> 2821

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A7

<400> 2821

taccggacta gaattcccgg gccgaccac gcgtccggcg aaaataatga agagccgcag 60

catggcatca tcggccgcgc tcttgggtgt agccctcgcg ctagtggcgg ccaccgcccc 120

acaggtagcg gaggcaaaga agaagagagc ggcggagagc ggcgaggcgg cggaggcgaa 180

gaagatccag gacgacttct gctcgacgct gtgcgagggc aagaagggga cggacctggt 240
 cgtgtgcaag gagtcttgcg cgctctccca gcagtccaac ctgggtgctgt acggcaggat 300
 ccagtgcaag ggcaagtgca ccgagcagaa gggcatcacg gcgccggcca tgaaggtctg 360
 ccaggaggag tgcgacaagg cgtacgtggt gaaggcggcc gaagtcacca aggcctgcag 420
 cgtc 424

<210> 2822
 <211> 378
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-A8

<400> 2822

taccggtcta gaattcccg gcccacccac gcgtccgacg agcaccatgc tcgacaccgt 60
 gcgcaccgac gttgacacct gcgaccaggg ctctgaggag cgcgaggagc tcacgccgct 120
 catggctaag caggacgcgg agctcgccaa gctctccagc aactgcctcg ccattgccac 180
 cgctgccggc ttgcgctaga cccctatgt atcgttcggt catccatagc tgtgcatgtg 240
 ctagctccta ggcagcagca acaacatata ctgcccctat aattaactct ccacgcatca 300
 gagaagcttc actcatgcaa cacacttgta attgtatatc gaggaagaag atgtagttag 360
 tgcaatcggt ccggttct 378

<210> 2823
 <211> 416
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-023-Q1-E1-B1

<400> 2823

cggtcagtat tcccgggtcc gaccacgcgt ccgcgcgtcg cgcgtcccca ccgtgcccgc 60
 ccgcacaagc cgccgaatga gatcctggga tccccctgcg acatcctcct ccacgcgccca 120
 tggccgcccc cgacgtcctc gcgtgccgct ccccagagtg gcgggcatgg tgcgcgcagc 180
 tatcgccggg gtcacgacgg cgacgcgatt ccaggagctg gtagactgga tggaggagcg 240
 gaaggcggca ttcanggacg acggcaagtg gacagagacg gtgaatctgg ggctcaggag 300

ccccgcgctc atcatgttcg ggctgcttca gttcgccatc gacagggacc tcgggttcgg 360
gaagaccagc ctctgtctgc cctgngtgcg ccatggccgg ctgggggtccg cgtccg 416

<210> 2824
<211> 397
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B10

<400> 2824

ttcgcggtc gacccacgcg tccaaaaaac attgatgttt attcacatag cccagaacc 60
agatgctatt agtgagtcca taagtacttt gaagttcgcc gagcgtgttt ccactattga 120
gcttgagca gccaaagtcaa gcaaggaagg aggaggagga ggaggaggag aagccagaga 180
gctcaaagaa cagattgctt gcctcagggc agcattagct aggaaagatg gagatcatga 240
gagcatacga agcactcaat cgagcccaga catatataga atgggaacgg gtaatgcac 300
acctgcgtcc aggcacccaa tagaagatgg gatcatagag aacgactcag cattgggaga 360
tttggtgaa cactcacagt tcgggagcag caattcc 397

<210> 2825
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B11

<400> 2825

gggtcgacct acgcgtccga ggacgcgtgg ggcgcagcac caaccgcgga tgcaaggcaa 60
ttgccgagtc cgggtggggcc tccagcgtcg tgctcaagga cgggatgacg cgagccccgg 120
ccgtccggtt cccatctgca cgccgcgccg ccgagctcaa ggcctttttg gaggaccag 180
cgaactttga caccctggct atggtgttta acaggctcag cagatttgga aggctgcagg 240
gagtgaagtg tgcgattgca gggaggaacc ttacatgag gttcagctgc agcacagggg 300
atgccatggg gatgaacatg gtctccaaag gtgtacagaa cgtgctggac tacctccagg 360
ctgacttccc tgatatggat gtcacagca tatc 394

<210> 2826
 <211> 359
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-023-Q1-E1-B12

 <400> 2826

 ccacgcgtcc gaccacgcgt ccggaatact cccatgacgc cactaacaaa ttcaacattt 60
 accctgagca aatcccttcc tggcttggtg actggattcc tgagaaagga gggttacctta 120
 tagggaatct gcagccagct cacatggatt ttaggttctt ctctcttggc aacctttggg 180
 ccatagcttc gtctctaact actccaaaac aagctgaggg aattcttagc cttattgaag 240
 aaaaatggga tgatcttgta gcaaacaatgc ccctgaagat atgcttccct gcaatggaag 300
 atgatgaatg gcgcattatt actggcagtg attctacnaa tgacccatgg tcatatcat 359

<210> 2827
 <211> 436
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-023-Q1-E1-B2

 <400> 2827

 cgtacggtcc agaatccccg ggtccgaccc acgcgtccgg cacgaagagt gatgtctaca 60
 gctttggagt tgtgtgctg gagcttttaa ccggtcgcaa gccagttgac cacacactgc 120
 cccgtggcca gcagagcctt gtgacatggg ctacaccgag gcttagtgaa gacaaggatga 180
 ggcaatgcgt cgatccaagg ctccgagacg aataccctcc aaaggctgta gccaagatgg 240
 ctgctgtggc cgccctctgc gtgcaatacg agggatgaatt ccgtcccaac atgagcatcg 300
 tcgtcaaggc tctgaacccc ttgctgcaca gccggtctgg caaccgccct actgcctcgt 360
 cggcctccca cgctgccgag cgatccggac tgtgatttct catcgctgcg acaactttgg 420
 ggtcacgana aaggac 436

<210> 2828
 <211> 413
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-023-Q1-E1-B3

<400> 2828

accggtccag taatcccggg ttnaaccaac gcgtcggcac gtctcactct cactccctca 60
 cacagatatt aaggaaaggt cccgcccttt tctcccgaca tccataaggg gggaggggaa 120
 aatacgtaca ttcacccggc tgcaataatg gactcgggtc cggctccggc gacgactacc 180
 gcagccgtca tcttatgctg atgcgtcgtc ctctcctgtg ccgcagctga ctacccgagc 240
 ctctccgact acgtcatcca tggccgctg tactgcgaca cctgccgcgc cgggttcgtg 300
 accaacgtca ccgagtacat cgctggcgcc aaggtagggc tggagtgcaa gcacttcggc 360
 accggcaagc tgcagcggc catcgacagg gtcaccgaca cgaccggcaa cta 413

<210> 2829
 <211> 245
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B6

<400> 2829

cgtagtccgt tacaactcct atagtgagtc gtattaagcc ctctgaccc cgtcttcttt 60
 cacctctcca acatgaaggt caacaccaag atcaagctgg agccgggtcat ggcgccgtcg 120
 tcgtccgggc cgcggagcgc cagcgagcta gcagagccgc cgtcagcgta cagctccagc 180
 acggcgcacc acccgcgtga cgtgcggacc acacggaggt tgtccgtagc gcgctcgtcg 240
 ttcgg 245

<210> 2830
 <211> 378
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B7

<400> 2830

tacaactccc tatattgagt cgtattactt ctcttctct cccggacctc tatcgtgttc 60
 atcatcacgg gctacataac tctctccctc gcacccatgg cgacgccgga caacacgggg 120

caccggcatc cgctgcacat atttggggag tggtagtgt acaatccggc cacgtccgag 180
 ggcttcatcg tcatattcaa caacgccagc tactacaaga agaccaccac cggccctgag 240
 gctgggaacg cgcgcacagg cattccgccg gtcttcagga acagcggccg cgacggcggg 300
 tacaggcccc acttcggcga cggcaaccag tacacgcagc ccacactgaa gaagttggcc 360
 ttctgtgggt gctgaatc 378

<210> 2831
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B8

<400> 2831

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 ccacagtgga gttcttggat gcacttagag atgctggaga caatcttggt attgttgagt 120
 tctacggaac ctggtgtgct tcatgcaggg ctctctttcc aaggctctgc cggacagctt 180
 tggagaacct tgatatattg tttctaaaag tgaattttga tgaaaacaaa cctatgtgca 240
 aacgactgaa tgtcaaagtc cttcctttct tccattttta tcgtggagct gacgggctac 300
 ttgaggcttt ctctgttcc ttagctaagt ttcagaagct gaaggatgcc attgcaatgc 360
 acaacactgc tcgttgcagc attggtccac ctgttgaggt ttgcgaatgt tgacttgctg 420
 gataacgcga gccctc 436

<210> 2832
 <211> 99
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-B9

<400> 2832

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 actactcaca cctgatcatt gtcaagtttt tacttgctg 99

<210> 2833
 <211> 387
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C1

<400> 2833

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cgcgggcgggc ggcggcggtc gtcctcctta gcttctcggc agcgcgcgac cgcttcctcc 120

ggggccgggtt cctctcggcg ggcttgcgcc ccttctccgt ccgcctcccc tcgcccggccg 180

gcaccagcac cgctgtccac ctctggggcg cgccgcggtc cgcgcgggcg cccgtgctcc 240

tcctccacgg ctctggcgcg tggcgacgt ggcagtgggc cccgtacctc cgcagcctcc 300

tcgcccggcg cctcgacccc atcgctccgg acctcctctt ctctggcgcc tcctcgctca 360

cggtccccga ccgtccgac accttcc 387

<210> 2834

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C10

<400> 2834

aattcgcggg tcgaccacg cgtccggcga cgtgcccccc gccgtgaacg gtccccctcca 60

tgtcatcccc aatgtcatca ccgccgagtt ccgcaccttc atcgagatcg tcttcgagaa 120

ccccgagaag agcatagact cctccacgt cgatgggtac gccttcttcg gcgtcgggat 180

gggccccggg aagtggctgc cggaggtgag gaagacgtac aacctgctgg acacggtgag 240

ccggcacacg atccaggtgt acccgcggtc atggacggca atcatgctga cgttcgacaa 300

cgcgggcatg tggagcgtgc attccaacat ctgggagcgg tactacctcg gggagcagtt 360

ctacatcagc gtcgtctcgc cggcgcgatc actgcgcgac gagtacaaca tgccccgaaa 420

cggcctccg 429

<210> 2835

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C12

<400> 2835

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ccctgacett tctgcaactga tctttccttg gcgtggcttc cattcacggt ttccttcttc 120
ctctccgtgt ttccctctta ctctctcaat gtagctctaa ctgtaacata atgttcttta 180
aatagatata aattgtcatc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaggggggg cccccaaaaa gttcaaagc ttacttacc ttgaatgcaa 360
gttcaaagcc cttcaaaagg tgcccaa 388

<210> 2836

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C2

<400> 2836

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gccaacgaa aatgtcgcgc gccacagctg cgtctctt ctacatctc gccgtcgtg 120
ccctcagcgc ggccgaggca ccggcagagt caccgaaggc aggcagtcct gccaaggcac 180
cggccgagtc accgaaggca ggcagtcctg cagctcctgc caaggcacc gagtctgctg 240
ccacgagaac tgcccccgct aaggcacctc aagccgcctc ccccccgcc gctgccgctg 300
ccccatcgtc gtcgtcgtct aagaagtctg gtccagctgc cgcgccgacc accgccgcct 360
ctacaccgtc t 371

<210> 2837

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C5

<400> 2837

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atcatctcca tgcgctgaag atcgttggtg cccgccatgc ttcccgatga ttgctgccac 120

atcgtcgtctg aggaaatttc aagccccata gctgcacata tactcgactt ctactacggc 180
gacgacggcc tgggcatga cctctttgcc gcggtgactg ccacctctgg ccattccct 240
gccactgacg atgatgtttc ttcgtctacc gctaccaccc ctctatctg cggctacagt 300
gaagacaccg cagctgctgg tggagccaca gcctacaccc cgttgacatc cttcgacacc 360
actctcacag ccctcctgga ggaagagcag c 391

<210> 2838
<211> 264
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C6

<400> 2838

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tcactgcct caggagctat tattgtatgt gaccgtttgc gtgtcgcaaa tgttgctgag 120
gcaacagccg tgatttctat tggaggacaa gggattgccc tttcaacgga ttagaaagct 180
gatcagacag attatacaca gagatctgag caggcatgag ggccagctct gtggcctgag 240
atatggcgac tgggtggtgt tctt 264

<210> 2839
<211> 260
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C7

<400> 2839

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agcaagctaa ttaagttggc agcatgcacc gctaacctta tatactactg agacttccaa 120
attctagtat atgtaatcct tttgttcggg ttcattgatc aattccaaag agtggaaaac 180
aagcagaagg ttagatatac atgccatttt tggaggcatt tttaaaaaaaa gcaaaacaaa 240
agggcggccg ctctagagga 260

<210> 2840
<211> 381
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C8

<400> 2840

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gacgatgaca atagccgccg tgctctgcct gtcctcttct tctggccgtc acgccgcggc 120

ggagaagact ttccgcggag gctgaggcgg aggctacagc gggttggatg ccggtggctg 180

aggctgcggc tgcagctact ccaccccgag cgaggcatcg ccatccacgc ctgccgctgg 240

ggagactact accccttcgt caggcggcgg ttactccacc cctagcgagg cagcgccatc 300

cacgcctgcc gctgaggaga cgaccactac tccttcgtca ggccggcggg gttacggccg 360

tgcaaccagc aaggcttcat c 381

<210> 2841

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-C9

<400> 2841

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ccttcagtgg ttcagccatc acaattggag ccatcctctt agaccgtctc cgacagttta 180

ctcaccctct ttagtcgatt gttatttaag tgcagtctct tcggagatgc aattacagtc 240

catcctctct ttcttttccc ctttctcaaa gagctaggac cttgctcgac tgagcatcag 300

gctgtagggc tctttgtgat catcttttgc cagttttctt cttgtagcag aagttgttgg 360

gcatggaact cctgttcctt tcaccaatag aagcataatg atcagcactg tgaaacaatt 420

tttcc 425

<210> 2842

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D1

<400> 2842

acggtcaaga gttccccgggt cgaccacgc gtccgtggag attttacaat atcatggcta 60

ccgttttact cagaagcaaa ggtgttggtc tttgtatatt tgtggtaccc taagacaaag 120

ggaactacgt atgtttatgg aactttcttt aagccatata tttctcagca tgagaatgaa 180

atcgaccgaa atcttcttga gctcagagct cgagccaccg atatggttgt cctttacttc 240

cataaggctg ctccggtagg gcaaaatact ttctttgacg ttttaaaata tgttgctgcc 300

cagtccccctt ctcggaatc aaggctgcac cctcatcagg tttggtcgaa tgtattctct 360

tttttgcca aaaaaaaccc attgaataat ttgttgtaa gtgttcacga tgtttacaca 420

gataactcaa acctttttta aaggtc 446

<210> 2843

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D10

<400> 2843

ccacgcgtcc gtctgaatct gatgcccggt aattcgccaa ttttctttgc cctttactcg 60

actttgcacc agagaagagg ccaacagctt tagattgctt aaagcatcca tggcttaaac 120

atgacgagga taaaacatgt ggggtctctta acaataatga tgccaagagc attgatctgg 180

tccaaagcac agggagtatc accaccgttg actgtacaaa tattgatttg acgagcaaaa 240

aaggcagctc cactggaact tgtgataaga ctgttgatgc aaaatacaac acaagaagca 300

ttaccagcaa tgctaccatg aacacttatg tacaaccac ttctggaagt tttgccaaaca 360

gacttgcgaa aaatgttgat gtaaattccga acat 394

<210> 2844

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D11

<400> 2844

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gaataagacg gtcctcatcg tcgcggcgat gcttctcatc acgctcgtgc tggaggccgc 120
ccctccggcg accgccatgg actgcaaggc cgggtgtgac gaggtcacgg gccactcca 180
catgagcatg gaggactgca tgaagagggtg caaggagatc gctgctaagc aggggcctag 240
ggacccttac aaggataaca aacttgacat cccatgaact agttaatgct cctatatcat 300
ctgcctatcc atgcatgcat tgcattgctg atgcacactg tgcgtgcctg cccacaaaagt 360
tcgacaacac accgatctcg atggatttgt aatcgtgtcc act 403

<210> 2845
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D5

<400> 2845
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tgccgcctgg tgcccagcca gaagctgttc ccggaccgct tcaagatccc ctctacctg 120
ggccgcccct ggaaggagtt ctgcgcctc gtcacatgg agagcaccat cgcgacttc 180
gtcaagccag aggggtacat gccctggaac ggcgacttcg ccctcaagac gctctactac 240
gccgagtaca acaaccgcg gcccggcgcc ggcaccagca agagggtcaa ctggcccggc 300
ttccacgtca tcggacggaa ggaggccgag ccgttcaccg ccgggcccgtt catcgacggc 360
gccatgtggc tcaagtacac cggcgcgccc cacata 396

<210> 2846
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-D6

<400> 2846
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acaaagcagc ggtgaaggga ggggaggaaa ggaaacagca accacatgcg attattttctt 120
ggggattccg cccctccgac ctatctaagc ggaccataac cacgggcagc aggacattat 180
attcttctgc ctgcccttcc gttcaatttc aatttcactt tccttctctc ctctcctcct 240

gctgctacta ggttcggggc gtccgtcctt gctcttgatc tgcattatatt aattcggacc 300
attccccgc cgtcctcccg cccgcctgcc ggagatggag atggacaacg ggcacgccaa 360
gtaccgggtg gccgtcattg gcaacggg 388

<210> 2847
<211> 396
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-023-Q1-E1-D7
<400> 2847

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caaccaata atggcagaag tcctatcagg atctcatgaa caccgtctaa gctctgcctt 120
agatggacac tacgacgaga agaggaaatc caatgtggaa tacacagagg acgagaagaa 180
agccgtgatc gcggtctga aaaagaaggc tttagcgcc tcacagaagt ttaggcattc 240
catgaagagg gggaggaaga gcagcaaggc gatgtccatc tcgattctgg atgagcgtga 300
acctgaggag gtgcaggctg tggatgcctt ccgccagctt cttgtacttg aagagctgct 360
accatcgag catgatgact accacatgat gctaag 396

<210> 2848
<211> 373
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-023-Q1-E1-D8
<400> 2848

ccacgcgtcc gatggcatgc acaaacaatg cgatgagagc cttgttcctc ctggtcctct 60
tctgcatcgt gcatggtgag aaggaagagt caaagggcat cgatgcgaaa gcgtccgggc 120
ctggtgggtc cttcgacatc accaagttgg gcgcctccgg caatggcaag acagacagca 180
cgaaggctgt gcaggaggca tgggcatcgg cgtgcggcgg cactgggaag cagacaatcc 240
tcatacccaa gggcgacttc cttgtcggac aactcaactt cacaggccct tgcaagggcg 300
acgtgaccat ccaagtggat ggcaatctgc tggcgaccac ggacctaacg cagtacaagg 360
accatggtaa ttg 373

<210> 2849
 <211> 335
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-D9

 <400> 2849

 ctgcgcggtc gacacacgcg tctaaacacg cgtccgccca cgcgtccggg cctcgtcgcc 60
 gccccctcct tttccccctc cteccacacg caccgcccgcg tccgccccct tcgctgcccc 120
 tgcccggtcg gttccgatgg ggtacgtgct gtcggcggcg gcgaggggtgc tggagcagcc 180
 cacggcgtgg ggggcggccc gggagatggc gtcctcgcg gggccgctct gggcggcggc 240
 cctcctcggg ctctgctcg gctgggcctg gcgccgcgc tgggcagctg gactcgtcgc 300
 cgcccccgcg cccgcagccg ccgcgcaacc gcct 335

<210> 2850
 <211> 384
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-E1

 <400> 2850

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 ttcccatccc atggcggggcg gcgacctcac gcctcctcct cctcctcccg aagagacgcc 120
 gccggcagcg gcggccgagg acctgatcga gatcgtggag gaagggtcgg ggcggctgga 180
 catcgcgcg tacgtggacc acgtgcgcga cctgtcggcg ggcgccatcg cgacgttcga 240
 tggcacgacg cgggaccact tcgcggggcg gcgcgtggtg gagctccggt acgatgcgta 300
 cgcggccatg gcgcggcgcc gcctggctgt catactgctg gaggcccggc cgctgcacgc 360
 gcagctgctg ctggccgtgg agca 384

<210> 2851
 <211> 388
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-E11

<400> 2851

ccacgcgtcc gcacaaacag atcgatcgat tacagcaatg gcggccaagg tgttcctcct 60

cctccgactc agcatggteg ccgtegtcct ggctgccatc gccacagtag cgctcgcgga 120

ggaagccgat ccgcggggcac tgccggcaca gtggaccacc gcgaagaagt acaaggccac 180

gatggacgcc aagacgcggc aggctttcga cggcgtgggtg gccgccgcta cggcagagaa 240

gcgggtcccag gcggtggagg ccggtgctgca gcagcagctg aacatggacg tgtccctgtc 300

caaggcgacg tcttccgggg acgagaacaa ctacgtgagc gtggccgccc cctacgagaa 360

ggccgcgggc gccgtcatcg ccgcgacg 388

<210> 2852

<211> 365

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-E12

<400> 2852

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taaaaaggag agagagagag atggctctgt cgtctcgccg tatggccgcc gcaccattct 120

tcgtcgtcgt ccttctcgtc ctctgtggcg cagagaggac gatgggcagg gtggtgggtg 180

aagagacgct ctgcttgctg cagagccatg ccttcaaagg cgtgtgcctc agcaacacca 240

actgcgacaa cgtatgcaag acggagaagt tcacaggcgg cgagtgcag atggacggcg 300

tcatgcgcaa gtgctactgc aagaaggtct gctanggcac gaccggcagc aagccccagc 360

cgtac 365

<210> 2853

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E2

<400> 2853

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atcgggcagg gcacgtacag cagcgtgttc cgggcgcggg agctggccac gggcctgctg 120

gtgtcgctca tcaatgtgca gttecgacatt gtgcacctcc agaacttgca gttcatggag 180
caggaaagtt gtaaccgccg catcctcagt ggcttgccga agctcgtcga actcgaaggc 240
atcaatacct cccgtcctc tccctccatc taactcatct tcgaatacct ctagcacgac 300
ctggtcggcc tcaactcctc atccgatata atcttcaccg agccccagat caagtgtctac 360
atgcgacagc tgctggtagg ggctggcgca ctgcaatgca cgcggtgtga tgcaccggga 420
catcatttgc gccaacctg 439

<210> 2854

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E4

<400> 2854

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aggaattgcc tccaatggc aaggagcccg gcaacaatgc gccgtcaagc gcaaccaacc 120
agagggttgc ggcggccaag cagtacatcg agaaacacta caaggagcag atgaagcatc 180
tgcaggacag gaaagaaaga cgggtgtagtc tagaaaagaa actagcggac gctgatgtgt 240
ccgaagagga ggtcaacaac atcctgaagc agttcgagaa gaaagagacg gagtacctgc 300
ggttgcaaag gcacaaaatg agcgtcgagg atttcgagct gctaacaatg atagggaagg 360
gagcttttgg c 371

<210> 2855

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E6

<400> 2855

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cggctccctt ctggccgtgg ccatcgcgct gttcctgtcc gtgtccctcg gcgtgcgcgc 120
cgccggcgcc ggcgcggcg ttgacatcaa ggtgtcgtgt gcagcgacgc cggacccgga 180
cgtgtgcctg cgcgcgctcc aggcggacag cgactccaag accccgcggg acctggcgga 240

ggcggcgctc cgcgcgggcga cgaccgcggg cggcgcgggcg ggcgactacg cgcgggcacga 300
gatggacgtg gtgaaggaca acgacatgtg gcagtgcctg aacgagtgcg ccgggggagat 360
cgaggaggcg ctg 373

<210> 2856
<211> 437
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-023-Q1-E1-E7
<400> 2856

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gtgctgtgga gttccttggg gatgaaaact atgatgtttc atgcaattgc atgttcagct 120
tttgttgga ttgcactgag gaagctcatc gaccagtga ctgtgagact gtttctaagt 180
ggatattaaa aaacagtgca gaatctgaaa acatgaactg gatactggct aattctaagc 240
cctgtccaaa gtgcaaacgg ccaatagaga aaaaccaggg atgcatgcat atgacatgca 300
cccctccttg taaattcgaa ttttgctggg tatgtctggg tgcattggca gatcatggag 360
agagaacagg tggcttttat gcttgcaatc gtttaagaatc aagcanagaa ggaggaattt 420
tacgacaaga ctgatgc 437

<210> 2857
<211> 324
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-011-Q1-E1-G10
<400> 2857

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gctggatcga attgtctcac gttacaaca tcgggatcac cggctcgggc acgctggacg 120
gccaggggac cgccgtttat agcaagagca agaccgacaa cgtgaaggcg atgccaaca 180
cactggtgct gtttcacgtg atcaacgcca ctgtcgccg aatcaaacta ctcaactcca 240
agttcttcca catcaacatc gacaactcag agagcatcac cgtgaaggac gtgaacgtca 300

ccgcgccccgc cgacgttgag aaca

324

<210> 2858

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G5

<400> 2858

ccacgcgtcc accacgcgtc cgcccacgcg tccggttgtc acccaccat cgaggttggg 60

gccgccagca gggttcagccg ttcctgttct tgataaaacg agagaaggat ggcagtgttt 120

cagggagctg tcctattctt gtttctcttc ctgcgcgag cagagggtggg aaccatcgat 180

gccaaaatgg gagtagccat gcccatgcat gccttgataa tggagaaagc gaaacagcag 240

gagacggaga agaaggagga gaaaagcacg gagaaggaag agagtcaatg cttatcgccg 300

agtctccagt tcgagggtt ctgcttcaac agcgacagat gcgcgaggt gtgcatgaag 360

gagagctttc ccggtggcga gtgcaagcgg gacgtggcca tgcgca 406

<210> 2859

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G6

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cgtaccgtgt cctggaggtc accctggtgt cggcaaata cctcaagaaa gtgtcgctct 180

tctcccggac tcgcatctac gccgtggctt ccatctccgg attcgacctc cgcacccctt 240

cccacagcac ccaagcagac cacagcaacg gctgcaacct ctgctggaac gccgtggtac 300

acttccccat cccggctgcc gctgacacct gcggcctcgc actccacgtg aggtccgcg 360

cccagcgtct atacctgggc gatcgcgaca tcggcgaggt gtttgtgccc atcgacgacc 420

tcctggccgg cgccgacaag ggtggcgat 449

<210> 2860

<211> 458
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G7

<400> 2860

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cacgcgtccg cccacgcgtc cggcaaggga gagaaaggaa ggagggcagg aggagaggcg 120
gaacaacccg tctccctcca tctctctacc ttcttctcct gcgcccctat ccategctcg 180
caccacccac tgaccgggccc gcggcacccct tattaccata acatcacggg acggtggcgc 240
gatgcaagga ggcccactga gcccgcatga gtactgggtg atatecgccg cggcgctgct 300
gcaccagccg gcgtccacca tcgtcgtggc catcgaccgg gaccggaaca gccaaactggc 360
cgtgaagtgg gtggtggacc acctcctctc cggcgccctct catatcgctc tgctccacgt 420
ggccgtccca ttacacacga cccaatggtt cccatggt 458

<210> 2861
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-G9

<400> 2861

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ccaacatatc cggccagccc aacgaaaatg tcgcgcgcca cagctgcggt cctcttctac 120
atccgtcgcc gtcggggccc tcagcgcggc cgaggcaccg gcagagtcac cgaaggcagg 180
cagtcctgcc aaggcaccgg ccgagtcacc gaaggcaggc agtcctgcag ctcttgccaa 240
ggcaccgcag tctgctgcca cgagaactgc ccccgctaag gcacctcaag ccgcctccac 300
ccccgcgct gccgtgctc catcgctgct gtcgtctacg aagtctggtc cagctgccgc 360
gccgaccacc gccggtctta caccgtcttc ttccacggac gaggagttaa gcccttcgcc 420
gtcgg 425

<210> 2862
<211> 384
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H1

<400> 2862

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cgcacgggtcc ccgtcccaat ggcccagact ctgtccgcgc cctcggagct ggccaccctg 120

aagcgcccggt tcggcaacga cgggttcggc gatggcagca acaacggcag cgcgaccggc 180

gagaagccca aggcgcggcg gcgggaggcg gaccgcggcg cggcgatggc cgcggcgcg 240

cacgagttcg gcgagcacgg cggcgtgaac atgtccatcg aggcgtcggc gacgttcacg 300

gtgatggagc cggacacgat gcggcggtcg ttcgcgggcg agctgggccc cgaccgcggc 360

gacatgtaca tctacagccg gcac 384

<210> 2863

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H11

<400> 2863

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tttttttttt tttttttttt tgatttccag attgccttcc tttcttaaca ctaatttgca 120

ccatttacag aatcagcttt agcttacagg gactaaccaa gtctgaaaaa tatcagttaa 180

tgatgcaaag ccagcatcga tgcatacata acgatgactg aatgagccat gcgtgtgtgt 240

ttttataagc tgagacgtag taaaatgtag aagatcccat acagcgctgc ctgatcaggg 300

ttgggagctt gcatctgaag tggcagcagg aggcggcgaa ggcttgcttc tttggcggt 360

gaacaagttg tgcttggtgc aagcggcagc gacgatcgac aagccactga accta 415

<210> 2864

<211> 68

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-H12

<400> 2864

attcncgggc cgacccacgc gtccaccac gcgtccggtt ctagatcgcg agcggccgct 60
ctagagga 68

<210> 2865
<211> 435
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-011-Q1-E1-H3

<400> 2865

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ccatcccgcc gccgcggtct ctacggtcgc taataagccg ccgcatccag ggatggagat 120
gaagaagatc gcctgcgcgc tcctcgtcgc cgcctcggcc accgtggcgc tggccgcgga 180
ggcgccggct ccgtctccca ccagcggctc ctccgcggtc gcacccgcca tcgtcggggc 240
cgccgtggcc tcctttcttcg cgtactacat tctactgagcc gccggacgag gagccggagc 300
cggagggaag agaccaaggt ggggggagag acttggtctgc gctgcgctgc tctgctgctc 360
ncgcgcattc ccgatgcgtg ggcgtgctct gattgggcac ggcggtggca gtggcacacc 420
ttcgtcttcc ttttg 435

<210> 2866
<211> 383
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H5

<400> 2866

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ggactgcgtg aggccatcta gtgccccaaa agcttcaggt ttatcaaag gagggggcac 120
agctgtaaaa aagatccaag tcaagggttc aaaagggttc gacgttaggg gagtgaatcc 180
tggaaaaagg tcatcgccat tacagaagaa gccgagtga cctcaccga cgtaataca 240
gaagggcgga ggtgaaggaa ggaagactcc aaatggtaaa acaggaacca agaagtaagc 300
aatccagatg aaacttggtt ttgctgtgac caacttcacc ttggttaggg acagataaac 360

atgttgatac tatcgggtga tac

383

<210> 2867

<211> 455

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-011-Q1-E1-H7

<400> 2867

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accgtacgty ctccaccgcy tcgcgcgcy cggcctctg cccagccgcy gctgcctgcy 120
agggtttctg atggccctcy acgccgtcct ttctctctag tgcccagctt tattgcagat 180
ccagccctct gatectgty ttctttcacc tctccaacat gaaggtaac accaagatca 240
agctggagcc ggatcatggcy cgtcgtcgt cctgcccgy gagcgccagc gagctaccgy 300
accgcccgtc accgttcagc tccaacacgy cgcaccaccc cgtctccgtg cccaccacac 360
ctaggttgty cttatcgtcy tcgtcgttcy gccacatggt gaccccgccc accgacacac 420
cgccgatcac gcccnacaag aagcaggacy acaag 455

<210> 2868

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-011-Q1-E1-H9

<400> 2868

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ccatccgty tcgccaaccy tagcaaggag ccaaggacat caccaccgcy cagcaataat 120
ggcgagagc atgaggattg tggcgctggc cttggtggcc ctgctggtgg tggcggcgcy 180
ggcgcccgtg gccaccgcy acggctgcta cgacgactgc tacgagcgt gcgccaacgy 240
caagaaagac cccgcctgca ccaagatgty caaccaggcy tgcggctcca cggaccagggy 300
cgccggtgcc gccggcgcy cgccggcttg atcgcccagc gcattcatcy cttcagctcy 360
atataatcgy tgctccgtca gcaaccaca tatgattcga tcaatcttcc tcctctaatt 420
tctccaaccc 430

<210> 2869
 <211> 323
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-A1

<400> 2869

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 ccatgcccga gagegagtg cgtacgccg tcttcgactt cgacttcacc accgacgaga 180
 actgccagaa gagcaagatc ttgttcattt cctgggtcncc ggacacctcg agggtcagga 240
 gcaagatgct gtacgcgagc tccaaggacc ggttcaagag ggagctggag ggcattccagc 300
 tggagctgca ggccaacgac ccc 323

<210> 2870
 <211> 373
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A10

<400> 2870

cacgcgtccg aggacgtaag aagtcgtcta attcttggat cgaattagac gacttcttcg 60
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 aggtagcgac tgattggcag gccacttgaa agttcgcgtg gtccggagta tcaaccttgc 180
 ctaccgcgac gcaagaggca acgatccgta tgtcgtccta cagcttggca agaggaaact 240
 gaagagaaac gtgaagaaca gatgcgtgaa ccccatatgt caacgggtac atagtctgag 300
 cgtcagagat gccagcctac cactgaatct ggacgtgttc gacaaagaca ccttcagcag 360
 agatgacccc atg 373

<210> 2871
 <211> 457
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-A12

<400> 2871

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acggacatca acgtcaacga ttgcactctt aagaagacga tgttcggcgt ccgcatcaag 120
gcgtacgagg acgccgcctc cgtgctcacc gtctccaaga tccactacga gaatatcaag 180
atggaggact cagccaaccc catcttcacg gacatgaagt actgccccaa caagttgtgt 240
actgccaacg gcgcctccaa ggtcaccgtc aaggacgtca ccttcaagaa catcaccggc 300
acctcctcca ccccgagggc cgtagcctg ctctgcactg ccaaggctcc atgcaccggc 360
gtcaccatgg atgacgtcaa cgtcgagtat agcggcacca acaacaagac catggctata 420
tgcacgaacg ccaagggcaa gcacaaaggt tgcctca 457

<210> 2872
<211> 442
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A2

<400> 2872

ccacgcgtcc ggtgatgctg tggctactca aggacaagct aagcgagatg gaccacgacg 60
gagacggcag gctaagcctg gaggagtctg tcgccaatc tcacatcacc atctccggcg 120
cgcgtcacga cgacgacggg ggccatgcc atgacctga gcgtgccgaa gctgcaaga 180
agttcacgga actggacgcc gacaaggaca actacttgac ggtggaagaa gcgcgctgcg 240
tactgcagag cctcgttacg ggggagttct cctatgctac ctcacatgcc aagttcttga 300
tgaaggctga tgtgaacct gacggcaaac tgtcgctgga ggagatgcta gacgactaca 360
tattcttcta cagcaccgtg tatatggatg atcattacgc cagtgaaggt gaagtagata 420
gtgattcccg cgacgagcta tg 442

<210> 2873
<211> 456
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A4

<400> 2873

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agataccacc accgtagcac cacacgcagg tacgaagaag gcgacgaaca tggcaaggct 120
ggccttggtg gcgggcgttg ttctgtgcct cctgttagcg acagggccgc agggggccat 180
cagcgccgag gggatggtgt catttgacaa tttgatcagc tgcaaggtag tgggcaactg 240
cgacaagaac ctgggccccg aggcctcccg cccagggaac cccgccaacg actacaccg 300
cggctgcaac ccgatcaccg gctgtcgcgg ctgatcatat ctctctggtc gatgtgcgcg 360
caatgtcaat gtcgcacgcg cgtgcaaggc acaggcctca tcgtgtggtg ccgcgtgtgt 420
gtatatatta cacacatgca ttatacattg gtcgtc 456

<210> 2874

<211> 455

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A6

<400> 2874

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tggcctccag gtcctccatc ctacttgcaa cgtcgatgct ggctgcgctg tttgcggttg 120
gtttgtgcac cccccgctc accttccagg ttggcaaggg atccaagcct ggccacctga 180
tcctcacccc caatgttgca accatatccg acgtggagat caaagagcac gggggcgatg 240
acttctcctt tacgtcaag gagggcccga ccggcacctg gacgctcgac accaaagccc 300
cgctcaagta ccccttttgc atccgctttg ctgtcaagtc cgggtgggcta cgcacgctg 360
acgacgtcat ccccgctgat ttcaaggccg gcaccaccta taagaccaca ctcagcatct 420
aatcagcctc tgatgatgaa ttaaatttca aaaga 455

<210> 2875

<211> 330

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-A7

<400> 2875

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ctcttcgatc gatcctgggt tacgtatgca tgcagcgtag ttcgctcgtc atcgtatgca 120
ctaacgtgca tttcattcgc cgtcgttcga gatcctacgt cgtgcaagag atatgcagg 180
cgtagctaa atcgatctcc tacaaggaga tcttccttta gctggctgaa gtgctagcgg 240
tgacgcacac ataggtcttc ctaggaatta gttagccaga ctgaatggtg aaaggcacgt 300
tgctgtgtg cattcattat gctgggaggt 330

<210> 2876
<211> 453
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-B10
<400> 2876

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tactggaacc ggtgccgatg caggcgtttc tggtaggagga tccggtggcg ccgacggtgg 120
tattggagct aacataggtg ctggtgtctt cggaggcgtc aaatttggtg gcggcgccgg 180
aggaagtgtg ngaggaagtg gcagtgtctc tgcaggtgct tctggaggga gtaaatactc 240
gggggggtggc tcagattttg gatatggttc agcgagcaag gagttataga ggatgatgac 300
cactcaccac cgtagatcg atatgattcg tccaaggaa tttattcctg ccctttttgt 360
tatcgctgtg tgttttatta ccacgcacca gtcaatagtg tggaggcaat atacattgat 420
tccccctgac tggacaatac aaagataacc tta 453

<210> 2877
<211> 443
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-012-Q1-E1-B11
<400> 2877

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tctccgatcc attctccagc gcagcgaagt aaacatgtct gaccgggcaa agatgtcgtg 120

gcagggcgtag gtggacgagc acctgatgtg cgagatcgag ggccaccacc tcgcggcggc 180
ggccatcgtc ggccacgacg gtgccgcctg ggcgagagc acggcggtcc ccgagttcaa 240
gaccgaggac atggccaaca tcataagga cttagcagag ccagggcacc tcgcgcccac 300
aggcctgttc ctgggaccta ccaagtacat ggcatccaa ggcgagcctg gtgccgtcat 360
ccgtggcaag aagggatcag gaggcacac cgtgaagaag acagggcacg cactcgtggt 420
tggcatctac gacgagccga tga 443

<210> 2878
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B2

<400> 2878
cgggtcgacc cagcggtccg acaaacctcc ggacaagtca tcgcgacaat cgtatgcctc 60
ggtaatagca tcattgggcat ggccgcccgc catgatgagc tcctcgcccg cggttcttgc 120
gggcccccta acgtgcgact cggcccgcacc atcaccagta actacaaggc caagtggcac 180
aacgatatgg acacgtgatt cggtcagcgc aacggtgacg tggcaccgga aaacgaacgt 240
tcgtgcggca tcagaaacgt gaagttgcta ccctataacg gcattacagc ttgcagcata 300
gtcccgatct tcagcggtccg gaaagggtgc cagccatgct gccaggtgag atgcaaggtc 360
atgcctgaat gttcgatcaa tcgagtcacc gtgttgatca g 401

<210> 2879
<211> 444
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-B4

<400> 2879
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tccttgtagc agggcctgta cggccgcagc gtggcggacg cccgcacccg ccccgcgctc 120
cgctgctga agcagaacct gtcgttcctg gtgtccgtgc tcgcggaccg cgcgcagccc 180
gtggcgggtgc gggaggtgat gcgcgcctcc ttcgaggcgt tcctgatggt gtcctgggag 240

ggcggcaacg agcggagctt cgtgcgcgcc gaccacgcca cggaggagga ggacttccgg 300
 agcctgagggc gcgccttctc cacgtgcggg gaagggctgg tcnccgagga cgtggtggcg 360
 cgggaggcag agacggccga ggccgtcgtg gagctcatgg cacgtccac ggactacctc 420
 atcgacgcgt tcagcgtcgc cacg 444

<210> 2880
 <211> 449
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B6

<400> 2880

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 cgaacagcta tagggggagg cgatggacgg ccaacgacga cagcaatggc cgaggtctcg 120
 ctcgggggct gccgcgcgc ctctctcct cctgctgctc ctgtcgggtg ccttgggggg 180
 gcatggtgat cacggcgcgg cggctgcggg cgtcgcctc gcagccggca acggcatgac 240
 ggagctgcag aagcacgtgg cgttcttcga ccgcaaccac gacggcatca tcaccttcga 300
 cgagacctat caatgtctgc gggacgtcgg agtcggcgat gtcacggcca aagccagcgc 360
 cgcgttcata aacggcgccc tcggcccaa gaccagacct gacaattcca actcctcaag 420
 cacggatatc tacgtagaga acattcaga 449

<210> 2881
 <211> 450
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-B8

<400> 2881

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 ccgtgccagc agcagtagca gcagccggcg tgtgacgctg gtactgctcg gtctccgcct 120
 gctgcttctg gttggtgttg cgcaggcggg agtggagttg gtgcctgctg atgataatat 180
 cgccgccgcc gctgctggca cggcggtgga cgatggcgag ccgcctcagc agtgcgcgac 240
 cccggtgagc gtggaggagg cgtgccgcgg cgcgtccgag acgcacgccg gcgtggccta 300

cgaccactgc atggcgctgc tgggcgccga cccgcgcagc aaggaggccg gcaacaagaa 360
catgcacggg ctggcgggtgc tggccaacag gatggccatc gaccacgccg ccagcaccga 420
gtccaagatc gacgacctcg cggagctgga 450

<210> 2882
<211> 440
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-012-Q1-E1-B9
<400> 2882

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gccagattat cgcgcagtat taccagctca tccgcctcgg attcgagggc tacaaggacg 120
tgatgcagaa ctgccgcgac aacgcggcgg tgctccgcga gggcatcaac aagatgggct 180
acttcgacgt ggtgtccaag gactcgggcg tgccgctggg cgccttctcc ctcaaggact 240
cctccaagta cacggtgttc gaggtggccg agagcctgcg ccggttcggc tggatcgtgc 300
cggcctacac catgcccgcc gacgcggagc acgtggcctg catgcgcgtg gtcacccgcg 360
aggacttcag ccgcgggctc gccgagcgcc tcatcgcgga cctgggcaag accatggccg 420
acatggacgc gcacgccggc 440

<210> 2883
<211> 428
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-012-Q1-E1-C1
<400> 2883

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attcctccct ctccgccggc gtgcccgccc gccacatga cggagtcaga gggcgagacg 120
gaggctgcgc gcgcggccgt gctgacgccg ccgctgtcgc tggggggcgg cgggctcgcg 180
ggggagctcc gcccgccaa cctcggccaa cgggtgtcga gcctcttcg caacgtccgc 240
ccgggctccg acctctccca ctccagctg ccggcgacgt tcaacctgcc caagtcgcag 300
ctgcagctgt acggcgaggc cgtgtactgc ggcggcgagg acatgctggc gcggtgcgcg 360

cgcgggcgccg acagcctgca ggcgatgtgc gccgtggtgg cctggagcat ctccacaagc 420
gggcccccc 428

<210> 2884
<211> 460
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-C11

<400> 2884

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tctgctccga cgacgacgac gtgccgccac atccacatgg cggacgacgc cgtcgccggc 120
ggagcggccg ttcgctgccc agggccggcg ccggcctcgc tgtcttctag caggaagcag 180
cagcagcagc ccgacgacgc cggctgcccgc agcagcagc accactacca gcacgacgtg 240
atcatgctga ggcggacgag gagcggggcg gcgttccccgc cggcgatctc cgtgatccgc 300
aagggcgggc ggccgtggct ctgcctgccc gcgcaccgag aggggtggacg cctcgtgctg 360
cggcagatgc gcctgccgct gcaggagctg ctgcagccct gcaaggagga cggcaggttc 420
aagctcctca tgcactcgga ggcccgcgag cggccgtgag 460

<210> 2885
<211> 448
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-012-Q1-E1-C2

<400> 2885

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gctccggggc gtggccctgg tagtcttcgc cgccactgct ggcgcttctt cgtgctatct 120
cctgtcgaag atgattggga agccactggt gttcacgctg tggccagata aactcagctt 180
cttcagaga caggttgcta aaagaagaga gaagctcttg aattacatgc ttttctcag 240
ggtgaccca acattgcaa ataccttcat caacttggct tcaccgatag tagatgtcnc 300
ctaccacata ttcttactgg gaactctcat tggccttctc ccagcttctt atgtgactgt 360

canggctgga atcgctcttg gagaataaac tcgctaagcg acctttacga caccagtcg 420
 atagcgctgc tattcctgat cgggtgtg 448

<210> 2886
 <211> 446
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C5

<400> 2886

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 ccgaccctcg atcaagagtg aggagagcga ggagccgaag ctactgacct acgagcaaga 180
 agtccagag gaacccgaaa atgctgtgga agaggagaaa gaagaaccga gtcaaaaacc 240
 agaacctcag cctgtgcctg atccagaacc ccacccacag caaacgactg gagatctact 300
 aaacctggaa gcagaggtga atccttcggc tctggaactc gaacaaagca atgcattggc 360
 actcgcta at gtagcaccag gtgactacaa gccgccagca tctcaaagta tgtttgatgt 420
 caattcgtct ggggtgggagc tggcac 446

<210> 2887
 <211> 459
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C6

<400> 2887

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 gccgtcggca cctccgcttc aagatgcaga tctttgtgaa aaccctgact ggcaagacta 120
 tcaccctcga ggtggagtcg tctgacacca ttgacaacgt taaggccaag atccaggaca 180
 aggagggcat cccccagac cagcagcggc tcatcttcgc tggcaaacag cttgaggacg 240
 ggcgcacgct tgctgactac aacatccaga aggagagcaa cctccaactt gtgctccgcc 300
 tcaagggagg catgcagatc ttcgtgaaga ccctgaccgg caagactatc accctcgagg 360
 tggagtcttc cgacaccatt gacaacgtca aggccaagat ccaggacaag gagggcatcc 420

ctccagacca gcagcggctc atctttgctg ggaagcagc

459

<210> 2888

<211> 447

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-C7

<400> 2888

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ccgccactga tgcgggagga gaggaggaga aacgggagag gagcgtcggc ctgatggccg 120

gcctcatgga caaggccaag ggcttcgtgg tggagaaggt gacgcaaata cccaagcccg 180

aggctgcgct ggatcacgtc tccttcaga gcatcagccg cgagggcgtc gagctgcata 240

gccacgtcga catcagcaac ccctactcgc accgcatccc catctgcgag atcacctaca 300

cgttcaagag cgccggcaag gtgatagcgt cgggcacgat gcccgacccc ggggtggatcg 360

cggcgagcgg cagcacaagg ctagacctgc cggatgaaggt gccgtacgac ttcactgtgt 420

cgctgatgaa ggatctcgga ngggact 447

<210> 2889

<211> 461

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-C8

<400> 2889

attcgcgggt cgaccacgc gtccgatact cccctcccc gtgcgaatgc gtctctctccc 60

tcggccggcc gctcgtccgc tcgctctccc ccgcaagaat ctccaggtga tggcggcgcg 120

ccgctgccac tgacgtccgc agcggtgccg gcggcgagcg cgcgatccgc ggcgatggcc 180

gccgaggcca gcatggagcg cgcgcgcgac ggccggcgcc acgagcacca gcagaagcag 240

cagcggcgca gccaccggcg gtcggcttcg gcgtccgtga cctcgtccac gaaggaattg 300

gcaacaaggt ccgggtccgc cttcggcttc agcgtctcgg tcccaggcgg cggcggcgcg 360

ggcgcaggag tcggagcggc ggctgcggcg gtccccgccc gtggaggcgc ggcgggagcg 420

cgagcggcgt cgggcgcgcg agcagccgcg gtgcggggag g

461

<210> 2890

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D10

<400> 2890

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gattccggcg acgaccttcg ccgtcatctt atccgtcctc ttctgtgccg cggctggcac 180

cgccgtcgac aacgacctcc ccgactacgt catccagggc cgcgtctatt gcgacacctg 240

ccgcgccggg ttcgtgacca atgtcaccga gtacatcgcg ggcgccaaagg tgaggctgga 300

gtgcaagcac ttcggcaccg gcaagctcga gcgtccatc gacgggggtga ccgacgggaa 360

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ggt 423

<210> 2891

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D11

<400> 2891

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agagtaacgg acccagcgcc agctggaaca acgaccagag actccggcat ccagtcgacc 180

aacgtacaat gcgtttcatc caaggaagga cctccaagca gacgagcagg gttaagaccc 240

ttctatggct tgccttgctc cgccttgccg ctgcccgcgcg tccccgcctc gctcgcaagt 300

cgatttcccg cagcgatggt ggacagctac tagcactcgg acacattgat cgtgctctcc 360

accgtgcaga gcagctcata gaggaggaca acatgctgga ggcgttcaac ataataagagc 420

tacactgcaa tcgcctcatt gagtgcgcaa agcagctag 459

<210> 2892
 <211> 452
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D12

<400> 2892

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tgggcctgtt ctcatcggcc gctaagagat gtagaaagtg caagaagttc ctccgcagcg 120
cgggcgcgctg ctgctgctcg ccgtcggcct cctccgcccc tgctggtggt gtgcgcggca 180
acgaagaggc gtcgacgtcg gcgctggctt ccgcgccaga tggcaagaaa aagaagaggt 240
ggaggaagag aaagttctgg agaaagaaga agaaggccaa gaaggagagc gacgatggca 300
gcggcgagct cgtggatctc gtcaacagct tctcggccaa gtccgacgtg tgcaagaacg 360
tgaatgcggc cgaggagatc ctacggggct gcaaccagaa catgcccagc agggcgctga 420
cgttcagcca gctgggcgcc ggcaccgacg gg 452
  
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<210> 2893
 <211> 442
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-D3

<400> 2893

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acagaatatg tctcaactcg ctggtatcgg gcaccagaag tcttgctcca gtcattctgct 120
tatgattctg cagttgatat gtgggcaatg ggtgccataa tggctgagct gttgacactc 180
catcctctct ttcttgaac cagtgaacca gatgagattc acaagatatg caatgtcatc 240
ggtagtccag atgagcaatc ttggcctcaa ggattgtctc ttgcagaagc aatgaagtat 300
cagttcccac agaccaaagg cagtcaattg tctgaggtga tgacaacagc tagtagcgag 360
gcaattgacc tcatctcatc actatgctca tgggatccta gcangagacc aaaggccaca 420
gaagtcctcc agcatacctt ct 442
  
```


<210> 2894
 <211> 449
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-D4

<400> 2894

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acgacgacgc gccgccacag ccacatggcg gacgagccg tcgccgccgg agcggccggt 120
tgctgcgcag ggccggcctc gctgtcttct agcaggaagc agcagcagca gcccgacgac 180
gccggctgcy gcagcagcag cagcgacgac cactaccagc acgacgtgat catgctgagg 240
cggacgagga gggggcgggc attcccgccg ccgatctccg tgatcggcaa gggcgggcgg 300
ccgtggctct gcctgcgggc gcaccgcgag ggtggacgcc tcgtgctgcy gcagatgcgc 360
ctgccgtcgc aggagctgct gcagccctgc naagaggacg gcaggttcaa gctcctcatg 420
caccgggagg cccgcgcgcg gccgtgcgg 449
```

<210> 2895
 <211> 453
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-D7

<400> 2895

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ggtcgacca cgcacccgt caagaagacg tgctgtttga agagcatgag catacaacag 60
ctgatgggtc acctccaac ggtgacaagt tgagcggcgt agcgaatctt aaggctggga 120
tttctctgct caatataaga ctgagggcac ttgaagatga ccaggagttt ctcaagcagg 180
tgttgagttc cctccaatgc ggtagtgatg gactgcagtg tatacaggag ataagcggcc 240
atctagcaga gttgcgaata gttgtgactc gctaaggaaa atggttttgc cccgagtcca 300
aattgttagg tcatcatgag gtcttctcat gcagcagact aactaagggtg cttccactga 360
gtgcccacaa tccaatcta tctgaagatg gatgccgttg caggaaatac ccattgctctt 420
cgcttctgat cgggctcaac agcagaccaa aat 453
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<210> 2896

<211> 423
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-D8

 <400> 2896

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 tctggattgg aggatccatc ctggcatcgc tcagcacctt ccagcagatg tggattgccca 120
 aggctgagta cgacgagtct ggcccgtcca tcgtgcacag gaaatgcttc taattctttg 180
 ggcccaagag atgcaaagcc gagaggagcc attatcgcca gcctcccgcc ccgtttcttt 240
 ctccctttgt tgctgtttct tcattagcat gaacaaagtt ttctgccggc ctgtcggcag 300
 ccgctttctc ctattcatca agactgtaat gtctattggt gctacctaata gcttctcact 360
 tgtcattttg gacacatggt cgacctattc aattttaatg agatgcctga tgaggctact 420
 tgc 423

<210> 2897
 <211> 433
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-012-Q1-E1-D9

 <400> 2897

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 ggtggtgcct gtgatttctc tgattccagt aactcctcga aagatgccaa ggagagatcc 120
 acgtccatga ggaagcttat aatcgcagtg atcctttgca tcatattcat gacgggtggaa 180
 gtggtcgggg gcatcaaagc aaacagtctt gccatcttaa ctgatgcggc gcaccttctt 240
 tctgatgtgg cagcatttgc catatcgtaa ttctctctct gggctgctgg atgggaagca 300
 acaccgcagc agtcatatgg gttcttccgg attgagattc ttggtgcctt ggtctccatt 360
 cagctcatat ggctacttgc tggcatactg gtatatgagg ctattgtaag gctcattaac 420
 gagagtggcg atg 433

<210> 2898
 <211> 449
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E1

<400> 2898

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acaccacaca cacacacaca gaggagagaa gataagagaa cgaggggcag ggcagccagc 120

gccgctagct gaagcaaggc agggcaagag aatccgtacg tcgaggtgca ggtcgtaggt 180

aggatggacg cggaccagca gggcgtggtt gcggcgccgg tgaagccggc gctggccaag 240

gggacgccgt cggcgctcgtt ccggctccgc aacgggagcc tgaacgcggt gcgcctccgc 300

cgcggtgttcg acctgttcga ccgcaacggg gacggcgaga tcaccgtgga cgagctggcg 360

caggcgctgg atgcgctggg cctggacgcc gaccgcgccg ggctgtccgc caccgtcggc 420

gcctacgtgc ccgacggcgc cgcgggcct 449

<210> 2899

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E10

<400> 2899

cacgcgtccg gcagacgcta gcgcatgcac tacacacacc gtaccgagtg aacgaaatgg 60

caggtgcgtg agcgaagacc tcgaggttcc gcatggagcg ctctttgtga aagattctca 120

acagtgtaca catgaacata gtcggacaaa gggaaagaag aaatgaacag aagttccagg 180

accagcgtga agcaggggtg gagttctctt acgtgtatct tcctttcact ttgtagttcc 240

agtagtttaa aattcactta acgttttgat cattgaatgc cacatataat gccacaccag 300

acgcgccggg attcgatgac caaacgtcaa cgaagtacat cgcgggcgcc aaggtgaggg 360

tggagtgcaa gcacttccga accggcaaac tcaagcgcgc aatctacggg gtcacc 416

<210> 2900

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-012-Q1-E1-E11

<400> 2900

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acccggagag caacggcacc tggaagtcc caggcatcgg cgccttcag tgcaacgaca 120
ggtacatgcg tagccgctg aaggcggcag cggaggcggc cggcaagcct gaggggggcc 180
acggtggggc gaccgacgct ggcggctaca acaactggcc ggaggacacc gtcttcttcc 240
gcggcgacaa cgggtgggtgg agcaccgagt acggcgactt cttcctgtcg tggtagctgc 300
agatgctgct ggagcacggc gaccgcatcc tgtcggggcg cacgtccgtg ttcggcgagg 360
cgcccggtga ggtctccgtg aagggtggccg gcatccactg gcactacggc agccgggtccc 420
acgcncccga gctcaccgcg ggg 443

<210> 2901

<211> 96

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E2

<400> 2901

ccggtcgacc cacgcgtccg accacgcgtc cgtgctcatg aacaacctca tcgagcttcg 60
gcgccgacaa cgactacttg cgccacatc gacatg 96

<210> 2902

<211> 463

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E6

<400> 2902

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cggcaacaag atcagcgtgg ccttgctgag cgtggcccta gtgggcctgc tcctctgcca 120
cctcgccacc accgcctccg ccaccagaa agacatccac gtcctcggca gcgtcgacgg 180
ctccagcgac ggcagcagcc ccgagtcga aggccgcgtc gtctacggg acatgaagct 240
ggctgatacg gaatccgatg cgccggcgcc ggcggcggcg ccggggccgt cgtccgggtg 300
aactgagaag cgtgcgtcca gccaaagcaag gtggtcaaaa ccgagaacta attaagggct 360

cgattgtgtg tccggctact actgttcttg ccataattat atatagatac gcaaagtgtg 420
gccaagccta cccacatgca tgctattgca tgcctccgaa tat 463

<210> 2903
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E7

<400> 2903

cccacgcaac caaggacgcg tgggcggcga ccgacctgtg cccaccaag gacaagtggg 60
gcaagccgcc gcaggagcac ttcgacctca gcatgccgcg gttcctccag atcgcgcagg 120
agaaggccgg catcgtgccc atctcctatc gcagggtggc atgcgcaaag cagggcggca 180
tccggtacac catcaccggg aacaagtact tcaacatggg gacgatcacc aacgtgggcg 240
gcgccggcga catcgcgggc gtgtcgggtga aggggagcaa gcgcgtcaag tggacggaga 300
tgaagcgcaa ctggggggcaa gtgtggcaga ccgaggagga cctcacctgc gagtcgctga 360
cgttccgggt gatgactagc gaccaaccgc aaggcacctc atggcacgtt ctccccgctg 420
a 421

<210> 2904
<211> 458
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-E8

<400> 2904

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ggccgcaaag agatacagca acggcaagaa ttttctccgc agcgcgggcg tgtgctgttg 120
ttcgccgtcc gcctccgcc agcttgggtg tgtgcgcggc aaggaagaga catcgacgtc 180
ggcgccagct ttcgcgccg atagcaacaa gaaaagggtg aggaagagga ggttctggag 240
aaagaagatg aaggccagga aggagatcgg cgggctgggt gacctcgtca acgatatttc 300
ggccaagtca gaggagagcc taggggttag caacaaaaac atgccagca gggcgctgac 360
gttcagtcag ctgagcgccg caacggacgg gttcagttcg cagaacctgc tcggagaagg 420

cggcctttgga cgggtgtaca aagggtcct cgaggaca

458

<210> 2905

<211> 355

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A1

<400> 2905

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cccgcccttt tccgacattc acagggggga caggaaatca gcggccatgg cctcgattcc 120

ggcgacgacc ttgcgcgtca tcttatccgt cctctttctgt gccgcggctg gcaccgccgt 180

cgacaacgac ctccccgact acgtcatcca gggccgcgtc tattgcgaca cctgccgcgc 240

cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc aagggtgaggc tggagtgcaa 300

gcacttcggc accggcaagc tcgagcgtc catcgacggg gtgaccgacc ggaac 355

<210> 2906

<211> 465

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A10

<400> 2906

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cagggcaacg gctgttccag cgtgatgatg accctggccc cgtgcatgga cttcatctcc 120

agcaaggcgt cggagccggg gatctcctgc tgctcgggtg tggccggagt cgtgcagacc 180

gacccccgct gcctctgcat ggtactggac ggcactgcca cgtccttcgg catcgccatc 240

aaccagacca gggcgcgtga gctccccggc gtctgcaagg tcaaggcgcc gccgctcagc 300

cagtgcacag gcgtccctgc ggcacctgca ccgacgcctc ccgacgagcc agcagcggca 360

gctgaggaag aagccgacgc agctgcagat gcccttcag caaatggagc ctcaagctcc 420

acaaactcaa agaatgcagc gagcttactg cttctcatct gcgca 465

<210> 2907

<211> 430

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A11

<400> 2907

gggtcgaccc acgagtcgga gcagcatggc ggcgaccagc cgtctcctgc ctctgttcg 60
 tttttgtttt ggtgctattg atctctacga cggcaacggt gacggcgacg acagttcagt 120
 cgcggcagga ggggctcagt acctcccgcc aaagaggctc tggattccgg gcgaggcgga 180
 gggatgtgct gaggccggac aggacggccg gcgaagcttg ggcgccaccg gcgccaag 240
 ccaacggcaa cgtcccagga gggcccttcg gtcgtcgttg actcatccag atccagtgc 300
 acccgcccaa tcgccatcgt ttcattgacac atcgaccaga tagtttagaa ttcccatctc 360
 actggtgtgt gttattttta gttcttttca acgatgaaga actactggtg attacttatt 420
 gcatcgaaaa 430

<210> 2908
 <211> 450
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A2

<400> 2908

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 cgcctcacta ccgagggagg caccaagtcc gtctacgacg atgtcatccc tgccaactgg 120
 aaggccaaca ccgcctacac cgccaaataa ttaacttttag tgctgacaat actttaagcc 180
 ggcctatgct agctatacta gaattggttg gatcccaagc aatgcattac acatgcatgc 240
 attggaccgt gatattctatt tgctaccact accctattac gacagtgatg ctggcgccaa 300
 caatgatggt gtcacccctc ttctccatct tcttcatctc catatatagc tagagtgaga 360
 cttctctgtt gtttaaaaga gaaaagttaa gaaatggatt gacaagttat ataataagtg 420
 cctaataaaa tatttgatag gccttcattt 450

<210> 2909
 <211> 368
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A3

<400> 2909

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gcaggacacc atcggcgcgcg cgcagcgggc catcacgttc aaggacaccg gcaccgccaa 120
gatcatgctg cagctcgccg tccaggactt cgactcgtgc gaccgcccct tcaccaggc 180
cggcgctccc aaccccatgg ggaagtttga caaggagctc aaccagatgg ccagcaactg 240
catggctctt gcaaacatga tatgaaccac gcatgcaacc ccagcgtgag gtgccatcgc 300
atgcaaggaa tgcttgcatc caattttcaa ttaattaaga attcattgaa attatgagtt 360
atataaaa 368

<210> 2910

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A5

<400> 2910

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ccctcacaca aataataagg aaaggtcccg ccttttctc cgcacatcca caggggggag 120
gggaaaacac gtgcattcac ccggcgcaa taatggctc ggttccggct ccggcgacga 180
cgaccgcccgc cgtaatccta tgcctatgcg tcgtcctctc ctgtgccgcg gctgacgacc 240
ccaacctccc cgactacgtc atccagggcc gcgtgtactg cgacacctgc cgcgccgggt 300
tcgtgaccaa cgtcaccgag tacatcgcgg gcgccaaggt gaggctggag tgcaggcact 360
tcggcaccgg caagctcgag cgcgccatcg acggggtcac cgacgcgacc ggcacctaca 420
cgatcgagct caaggacagc cacgaggagg acatctgcc 459

<210> 2911

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A6

<400> 2911

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 ttttcctccg acatccacag gggggagggg aaaacacgtg cattcaccgc gcggcaataa 120
 tggcctcggt tccggctccg gcgacgacga ccgcgcgcgt aatcctatgc ctatgcgtcg 180
 tcctctcctg tgccgcggct gacgacccca acctccccga ctacgtcatc cagggccgcg 240
 tgtactgga cactgcgcgc gccgggttcg tgaccaacgt caccgagtac atcgcgggcg 300
 ccaaggtgag gctggagtgc aggcacttcg gcaccggcaa gctcgagcgc gccatcgacg 360
 gggtcaccca cgcgaccggc acctacacga tcgagctcag ggacagccac gacgaggaca 420
 tctgccaggt ggtg 434

<210> 2912
 <211> 423
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-001-Q1-E1-A7
 <400> 2912

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 ctcccccttc ctccccgtcc ccaccacat gccctgcctc cgccccgccc cgccctgccc 180
 aagctgagtt cccccacccc caacaaacaa ttactagagt agctgcattg gcggggaaat 240
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 cacatgtgcg ccgcggccgt tagccccgcg gagggcgagg tggagatgaa gtgcccgttc 360
 tgccacagcg gcttctcga ggagatggag accgcccgcg gggccgcgac cgacgacggt 420
 gac 423

<210> 2913
 <211> 428
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-001-Q1-E1-A8
 <400> 2913

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tatacgcatc gtcaaggaga ttgtccaaga caaagaactg gatagttgcg ctcaagacat 120
 tgatagtggc gcataggctt ctgagggaag gcgatcccat gttcaaggaa gagttcctgg 180
 cctactcacc cagagggaac atcttgcaaca tagccaattt caaggacgac tcgagccagt 240
 cagcttggga ttgctccgca tggattcgcg cctatggatg ctctctggag gaacggctcg 300
 agtgccctcag ggttctcaga tacgacatcg aaaccgaacg tctcgtcaga tatccccaga 360
 cttccagcaa ggtacatagt aaaaccagga ccttgccctag cccggaactc ttggagcagt 420
 tgccctgca 428

<210> 2914
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-A9

<400> 2914

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 cgttccgtct cctcgtcgtt ggcccccctg ctctctctct cctcctcgt ctccgccgcg 120
 gccagcgcgc ggaccgtggg cgacaccgtg caggacgcgt gcagcaagac ccagttcccc 180
 aagatctgcg tggacagcct cgccgccaag ccggagagcc agaaggcgac gccgcgcaag 240
 ctggcggagc tgttcgtgaa catcgcggcc gagaaggggt ccgggatggc caccttcgtg 300
 caccgcaagt acagcgacaa ggaggacagc gacatgttca ggtgctacga cagctgctcc 360
 gacgacgtgg aggaggccgt cgccacctc aacggcctcg tccgggagcc caccgacgcc 420
 aagtt 425

<210> 2915
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B1

<400> 2915

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 gtggcgccgt ttgcgggggc tgcgcgctg gatgtcgtgg agggcaggtc catggcgctc 120

gccgacgcgc ctgaggcggc ggctgacgcg cccgctcccg gtcccgactc cgctcatcc 180
 ccggactcgt cgtcggaggc gccctccagc agcagctcat ccgactagcc gcgcacaacg 240
 cagttcttgt catgatctat ctagcaaata aaaagatcat atgtctcgtt tgattctctg 300
 gaataactaa tagtatatat gctgcgcccc gatgatatat aaatatgtgc atgaaatgcg 360
 tgccggcaaac gcatggaatg tgcttgcta gctaattgtt gttgttaatg ttgttggttg 420
 tttt 424

<210> 2916
 <211> 459
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B10

<400> 2916

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 cgcaaccaat aatagcaagt gtgatcatcc gttgatccat cttgctaata agcctgcgtg 120
 cccttcgttc ttctctgtct cgatcccgac gacgctccgt tcggctccgg caaaccacat 180
 caagtcgcga tggagatgaa gaaggtcgcc tgcgccgtcc tcgccgccgc cgctccgcc 240
 accgtgggtcc tcgccgccga gggcccgccg cccgccccca ccagcgctc ctcggccgcg 300
 ttcccgccg tcggcgccgt gctgggcgcc tccgtgctct ccttcttcgc ctactacctg 360
 cagtaaaatt aaaggaggat cggagggaga ggctgctggc tgccattgcc tgtattcgg 420
 tggattccgt ttatatatat atttaagtac ttttaattg 459

<210> 2917
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B12

<400> 2917

gtcgaccac gagtcgggtc gctgcgccg tctcgcgcgc cgccgcctcc gccaccgtgg 60
 tctcgcgcgc cgaggccccg gcgccccccc ccaccagcgc ctctcggcc gcgttccccg 120
 ccgtcggcgc cgtgctgggc gcctccgtgc tctcttctt cgctactac ctgcagtaaa 180

attaaaggag ggtcggaggg agatgctgct ggctgccatt gcctgtattc ggttggattc 240
 cgtttatata tatatttaag tactttaatt tgggtctgaa catgtcgatt gatccattca 300
 ttttatttgc ttigccattt ctcccccttc tgttaatttc gatatgtaaa gaggggagaa 360
 tgggagacac tattegtttg gacatgacaa ttgggaatta atcaataccc atttggt 417

<210> 2918

<211> 424

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-B2

<400> 2918

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 cagcagtagc agcagccggc gtgtgacgct ggtactgctc ggtctccgcc tgctgcttct 120
 ggttgggtgtt gcgcaggcgg tagtggagtt ggtgcctgct gatgataata tcgccgccgc 180
 cgctgctggc acggcgggtg acgatggcga gccgcctcag cagtgcgcga ccccggtgag 240
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 catggcgctc ctgggcgccg acccgcgag caaggaggcc ggcaacanga acatgcacgg 360
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 cgac 424

<210> 2919

<211> 440

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-B3

<400> 2919

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 ggggtgcggc cccaactacc tggcactgct ggtcaagtac gtcgacggcg acggtgacat 180
 tgtggcagtg gacgtcaagg agaagggtc cgacacatac gagccccctga agcactcctg 240

gggcgccatc tggaggaagg acagcgacaa accgcttaag ggacccctca ccgtccgcct 300
 cactaccgan ggaagcacca agtcgtcta cgacgatgtc atccctgcc actggaaagg 360
 caacaacgcc tacaacgcc aataattaac tttagtgtg acaatacttt aagccgacct 420
 atgctagcta tactagattg 440

<210> 2920
 <211> 451
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B5

<400> 2920

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 ggcggtagag cagagacact ccacgggcct caaccagctc gccaccacct cctcctccga 180
 ccttctaggc agcaaggact agcatgcagt ccgagctcac cgaggaggcc cgcaaaggctc 240
 gcaagatata cgtagctaca gtcttctccg gcgactagcc caccatctct agcgccgctg 300
 atgcggtga tctcgctggt ctccggagac cgacggcgctc cagcggtggc cggaggagtc 360
 ctgtgttctt cgtttcctta ggtgtactta tgtgggtttt ggggtggcaa gagagttttt 420
 ttttgtgaac tctggtgtat cggatcaagt g 451

<210> 2921
 <211> 331
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B6

<400> 2921

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 gccgaccgtg gcaatcgccg gcggcaacga tggcgacgac ggggccagct gcccggtctg 180
 cctggaggac tacgcggccg gcgagcgcg ccgcgagatg cctgcacgc acatgttcca 240
 cggcaattgc atcatgccgt ggctcgagat gcacagctcc tgccctgtct gccggttcca 300

gctgccggcc atcgacgaca agagctcatg c 331

<210> 2922
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B7

<400> 2922

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tgggtctccat ggatatgtgc aatctcttga tcatgctgtc agtgatttga aaatgtacct 180
caagaaagtg ttagctgaga accctgggtct tccatgcttc tgcttcggtc actcgactgg 240
tggaggtatc attctgaagg ctgcacttga tccagaggta gaaactctcc ttagaggtat 300
tgtcttgaca tcaccagctg tccgtgttca gcctacacac ccaatcatag cggtcatggc 360
accgattttt gccctcatcg cgccgaggta tcagttcact gcgtcccaca ggaacggccc 420
gccggtgtcg cgc 433

<210> 2923
<211> 387
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-B8

<400> 2923

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aataaaagaa aaaaaaaaaa aggtggaggc tcttgatgat gatgttaatg atttgataat 180
gtatctctcg aaagtcttag ctgatatccc tgatcttcaa tgcacgggct tcggtcattc 240
aacgtgcttg atgtgaatac cttaaggctg cacttgatta acatgtagaa actctcctta 300
tatgtattgt cttgacataa tcagatgtcg gtgttcagcc tagacattca atcatattgg 360
tcatggcaaa gatttatggg cacatcg 387

<210> 2924
 <211> 426
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-001-Q1-E1-B9

<400> 2924

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ttgcagtggc tcaacagcct gttctcgcca tcggcgagct cctccggtag cggcagcggc  180
agttcgcctc attgggagaa ttgaacaata atgcaatata agaatggatg attgttgctg  240
cttgagccca ttggtgccaa tgtacatagg aagagcagga gcatgccggc atgaaaaatt  300
tggagccttt ttttcagtgt gtcaatttgg ctcatgtaat gttctctctg atatagttgt  360
catggctata aaaagaacac aaattggcaa gtaaaagaac ngagccatca ncaggtccga  420
acggcc                                         426
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<210> 2925
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C1

<400> 2925

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ccacgcgtcc ggttgagcgt ttggcaatat attacttgat ctacaggag gggtgctgaa  120
tttttgtcag atgggtgtgc agtctataga tcaacatact ttggtgaatt tctatggaaa  180
cattgggaaa acccttcttt cattggagac ggttttcttt gatgtcctgt tcattatcca  240
acactacgtg ttgtaccctg tcaagaagga cgagaatggt aaggcaatca tttctgaaag  300
ggtagcccc cttatcaggc cttcggacaa gcctgaagaa gataacgtat gatctagctg  360
tagttatatt gcgcacattg cattcacgcg ctgtttgcac acaggccaca cagc      414
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<210> 2926
 <211> 437
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-C10

<400> 2926

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tcggcgatcc tcgtcgtggc ggtggtcgtc ggtgtggtcg ccaccgtcac ccgtccggc 120
aagaaggccg gcgacaactt cacgggtccc ggggaggctt cccttgccac gtccggcaag 180
tcggtcaagt ccctgtgcgc gccacccta tacaaggagt cgtgcgagaa gacactgtcc 240
caggccacca atggcaccga gaacccaag gaggtgttcc acagcgtggc caaggtggcg 300
ctggagtcgg tccagacggc ggtcgagcag tccaagtcga tcggcgaggc caaggccagc 360
gactccatga ccgagagcgc gcgcgaggac tgcaagaagc tcctggagga cgccgccgac 420
gacctgangg gcatgct 437

<210> 2927

<211> 428

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-C11

<400> 2927

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cgcgggggta gggccgggtg agcacgagcg ctgccgctc gctgaaccat ggcgggctcc 120
gcggtggccg tcgtcctcct gtcggcgcgc gcgtgctct gcctgtacca cctccttttc 180
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caccatggca gcaacgttcc gtccgggtca ggaaccgcca acgtcgtcct ccgcttcggc 300
ctgtccgggc agccgctccg cctccacgac ccgcctccg ccgcccgcct cccggacatc 360
gacaccttc gcggcaagct cgagcggctg cttcctcncg acgaccacga acccggtgg 420
tcccgcg 428

<210> 2928

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C2

<400> 2928

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atgacacgga cgatgtgcct aggcctgctg cttctactac tggcggcggc gtcgacagcg 120

acggcgcatc tcacggtcgg cgatgtggat gagtacgtgt ccaagcgcac gcaggagtcc 180

cgccacagga acaacggtgg cgcgggcata gatgacctca tctccagtgc ggcgcgcttc 240

cacgccaacg tggatgcacg cgcctatggc cgtagatccg acctgcagga ggaggcaaca 300

gctaccgtaa taaccaaagc ggaagcacia gaggcttcag ctgaaggtgg cgattaacct 360

acctaaccat attatttatt cattcatatg catgcatcct tgttgctatg cca 413

<210> 2929

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C4

<400> 2929

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acggccacgg caccatcgac gggcagggag ccctggtgtg gagcaagaac cagtgccagc 120

attcttacia ttgcaagatc ctcccgaata gcttggtgct ggattttgtg acgaacgtcc 180

agatccgcgg catcacgtg ctcaacagca agttcttcca cctcaacatc ttcgagtgca 240

agaacgtgct gatcgacaaa gtgacggtca agggccccgg cgacagcccc aacacggacg 300

gcatccacat cggcgactcc agcaacgtga ccatcagcag caccaccatc ggcgtcggcg 360

acgactgcat ctccatcggc cccgggagca agatgatccg catccatggc gtcaag 416

<210> 2930

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C5

<400> 2930

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 cgcaggatcc ggtgctcgca gaaggagtgc gcgctgctgc cctacaacac gtgccagagc 180
 cccagcaagg cggagtctgt cagctactac cagcagatgc aggacggcac gttgacgatg 240
 ggcattctac gcaaggagaa ggcgacgggtg acggtgtcgg acgggcgtat ggccaagctc 300
 cctggcctca tccttggtgt ctccgtcctg gaggcggcg gcagcgtgga cgcacacgac 360
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 ggccagcgct tctccttctg cctcctcagc g 451

<210> 2931
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 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-001-Q1-E1-C6
 <400> 2931

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 aaccacccac cgcgcgccgc gcctaaccct agccctaacc gtggccgcgg ggtcgccgac 180
 ccgcgcggcg cctcggacga ctgcgcgtcg tcgaagcgca tgctggcctt ccacttcctc 240
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 cgcgcgggtct actcgtccat ggcgcgcgcc gccagcacgc gccgggcctg gacgcaggcg 360
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<210> 2932
 <211> 435
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-A5
 <400> 2932

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ctccagtctc ctctcctcgc cccgctctag acgatcgatg gccgcaacgg cggcggagga 120
aatggaaagg atgttgaagg cggattggaa gaagggaata agaaaaggaa ccgtaccggc 180
tggtggaata acgggcgctg ccggcttaac tgcgggacaa cgagtacatc caccgccact 240
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ccctcaacgt ctggacgcat cttatangat ttttcatctt tctcgctctg accatataca 360
cagcagcaca agttccaaat gcagtagata tccggagctt gcagcatttg ccagatgtac 420
tgagaaaggc tgata 435

<210> 2933
<211> 382
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A6

<400> 2933

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cgggcgctct cctgttctc ctctcctgc tgctggtgcc agggccggga gggcggcgcg 120
gaggtggcgc tcatggggct cgcgggggac gggtcggcgg acaccgcaa cctcagtaat 180
agtgaaaatg gtcggttcag ttatggagtt gcaagttctc ccgggaaaag agcatcgatg 240
gaggacttct atgaggcaag gatagacgac gttgacggag agaaagttgg aatgtttggt 300
gtgtatgatg gtcatggagg agtcagagca gctgagttcg ttaagcagca tcttttcaac 360
aatttaatcc aacacccaaa gt 382

<210> 2934
<211> 426
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A7

<400> 2934

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gtcacacgcc accgcacagc tagctaccga cgaagacaag gcgggcaatg gccaaaggcg 120
ccctgccgct tccgtcgctg ctgctcctca ccgccttctt cttccaccac ccctgctgca 180

cggcgcaagg ccgcgccgaa aacatctcgg aggtcgatgc cgcggtccgc gcccgcgcg 240
 ccgagctgct ccgcgacgcc agcagccagc tcgtcgacct gccctcccg gccaaacctet 300
 ccggcgcggg cgtcagggcc tcggccctca acgtgcgag caacgcgctc tgggcccggag 360
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 gcctcg 426

<210> 2935
 <211> 456
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-A8

<400> 2935

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 tcaaagccaa gcaaagcaac ctccaggcca tggatgatcg cggcgcgggc ggtggcgcg 180
 cggccttttg gatagtagcg gccatatgcg tcgtggctta cactcgaag aagaggcg 240
 cgctgggtaa cagcgtgtcg cattcatcgg gatggctgcc cgtctacggt ggcaactcg 300
 acacaaacgc cagcaagtcg tccggcggca agagcgcggc gctcaaccg aacatcacg 360
 ccatgtgccg gcatttctcg ttccaggaga tcaaggcggc gaccatgaac ttcgacgagt 420
 cgctggtgat cggcgtgggc gggttcggca aggtgt 456

<210> 2936
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B10

<400> 2936

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 gccagatccc tctctgcaa ggtttctttg cgagtggccg gagaagatga tggcggggt 180
 cctctccagg gtctctctgc tggcttttgg ctatgcctat cctgcctatg aatgctacaa 240

gaccgttgaa ctgaacaaac cacagattga gcagctcata ttttgggtgc agtattggat 300
 tttagttgcc ctgttgacag ttttggacag aattggggcga tttacaatat catggctacc 360
 cgtgttactc agaagcaaag gtgttggttca ttgtatatatt gtggtaccct aagacaaaacg 420
 gaactacgta tgtgtatg 438

<210> 2937
 <211> 419
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-B11
 <400> 2937

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<210> 2938
 <211> 448
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-B2
 <400> 2938

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caaggaaaaa cctgagtgtc cgaggcaatcc agtcacggtg tacatcactg acatgaacta 420
cgagcctatc gctccctaac acttcgac 448

<210> 2939
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B4

<400> 2939

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catgcggggc cccgaagggt ctgcccggtc ccaacatcac caccatctac aagggaagt 180
ggctcaccgc cagggccacc tggtaggtc agcccaacgg tgccggcgct cctgacaaca 240
gcggtgcgtg cgggatgaac aacgtgaacc tgccacccta cagcggcatg acggcgtgcg 300
gcaacgtctc catcttcaac gacggcaaag gctgccggtc atgctacgaa gtgagattca 360
acgaaaaaac tgaattctcg ggcaatccag tcacggtgta catcactgac atgaactacg 420
agcctatcgc tccctaccac ttcgac 446

<210> 2940
<211> 442
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B5

<400> 2940

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gcaactaggg gatcattgca tgatatctc catggtaaaa aggggtgtcaa aggagcccag 240
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ctcgagttcc tccacgagaa ggccgatcct cgagtgggtc accgcgacat caagtcaagc 360
aacatactgc tctttgacca tgatgttgcg aagatcgggg acttcgacat ctcaaaccag 420

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442

<210> 2941

<211> 387

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B6

<400> 2941

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cgtacttggt cttcgtgtgc aacgtgacgt tcgggtaccag gtctctgctg ggcgtgcccc 240
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gtatcatcgt cgtcaatgtc ctcatcctc tcgaccatcg gctctcttcc acctgtacag 360
ggatgcatca catgaagaac tcttga 387

<210> 2942

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-B7

<400> 2942

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ccggcagaaa tgccggcgac aacttcacgg tcccgatgga ggcttcgctt gacacgtccg 180
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tggaactgcg ctcagtccag acggaggtcg agcagtcgac gtctatcagc taggccaagg 360
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ccgacgacct gatgggcatg ctcgagatgg ccggcg 456

<210> 2943
 <211> 459
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-B8

 <400> 2943

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 tgacaacaga tccttggtcg gttatttcta atacatacgg attggatgag attggaaaag 360
 attaagacga agttaaactt gtttgcaatt cagacacatc caatctcatt cagttcacat 420
 ggattgacag ctaaccgatc aaccctgtag ttggacaag 459

<210> 2944
 <211> 414
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-006-Q1-E1-B9

 <400> 2944

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 tcgccgttcc tttttgcctt gttggcgctc gcggcgaccc tgctcagcgt cggcgacgcg 120
 ttggtcgctc acggcctgca ggtgggggtc tatggcaaga cgtgcccggc ggccgaaggc 180
 gtcacagcgc acatcgtcaa caacgaaatc gctatggacc ggggcacatc ccctggcctc 240
 attcgcctct tctttcacga ctgcttcac acggggttgcg acgcttccat tctcctggac 300
 gagtgcgccg ccggcgacgt ccagagaag gagtcgtccg ccaacggctt caccctgggc 360
 gggctcagaa ccatcgacat cgccaagtcc accgtacagg gcatgtgccc cggc 414

<210> 2945
 <211> 438
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-C1

<400> 2945

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cggccttcaa ccggcgacga gcatccacca gaaacgtgga gctcagagca ttggtgcctc 120
tttctctttt caacaaggat tccggtgcct tgtttcacia gacanaaaaa gtctcaaggg 180
tcttgattct tgtatgaact caagatttat ggtggatctt ggagctgtgg gatgctaagc 240
ctggcttagc tactagatta tgaactctct gctgatctaa tagcatttct acaagaattc 300
ttttgctgga aggtttatta gttatttgca acaatgaagg aacatctaata gcttaatat 360
gatgacctaa gcattcttga gcctaacgag gtcattggga cagtcaagaa taaatcatct 420
ggggaaacca ttgcacat 438

<210> 2946

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C10

<400> 2946

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tctctgcctc catcccatcc cgccgcccgc gtctctacgg tcgctaataa gccgccgcat 120
ccagggatgg agatgaagaa gatcgctgc gccgtcctcg tcgccgcctc ggccaccgtg 180
gcgctggccg cgaggcgcc ggctccgtcc cccaccagcg gtcctccgc ggctgcaccc 240
gccatcgctc gggccgccgt ggctccttc ttcgcgtact acattcaactg agccgccgga 300
cgaggagccg gactgccgga gggaagagac caaggggggg agagacttgg ctgcgctgcg 360
ctgctctgct gctcccgcgc attcccgatg cgtgggtggg tgtgctctga ttgggcacgg 420
cagtggcaca ccttcgtctt c 441

<210> 2947

<211> 218

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-C11

<400> 2947

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tcttcccacc tgcagcaacc ggccattgcc cgcgggttgcg ttgcatttgc atggctgccc 120
gctgcgctct ggaaccttgc actaccggtt cggcggccta ggcgcggggc atcttccgag 180
tgctgcgctc tctgtacacg ctcagatcct ctctcggg 218

<210> 2948
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C12

<400> 2948

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gtctgctgcc acgagaactg cccccgtaa ggcacctcaa gccgcctcca cccccgccgt 120
tgccgctgcc ccctcgtcgt cgtcgtctac gaagtctggt ccctctgccg cgccgaccat 180
cgccgcctct acaccgtctt cttccacgga cgaggagtgt agcccttccc cgtcggcatc 240
caccgccgag gtggcgctcc ctgccgtga tgggcctgct gagggaccgg cggctgctga 300
tgctccggt gctgctaccc ttggtagcgg agctgccatc gctggtgtcg ccgctgctgt 360
cgctaccatg atcttctact gagttcacca atgaccgtgt cgtcgagggt gggcac 416

<210> 2949
<211> 361
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C2

<400> 2949

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cccgtcgccg ggatcccgc ggtgacaatg gtgaggtggc tgccgccgcc gccgccagcg 120
gacggcgaga tacccttcgg acacgacgcc gtcgccttgt ccttcttcgt ggcgtgtgtg 180

gccgccaccg tcgcgctcgc gtcgtccatg tgctcggcat gcggtcgcaa gccgaaggcg 240
gccacccgtg cagacccggc cgcttcggac cagtccaccg ggacggggctc gggctccgtc 300
tccggtggcg gcggaagcca ggaggctagc gccgcggagg cggaggagga agtggtgaga 360
c 361

<210> 2950
<211> 297
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-C4
<400> 2950

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ggtgctgcag tgcctcgtcg aggactcgac catcagggca gccatggggc acgtcgtcgt 120
ctcgtcgcag tacctcacia tcgcgcagga gcacgacgat gccaccggg ctgcgcgcgt 180
gtacccactc gatcacgctc aggctgcggc gctcaacatc cgggatctga acgctcatct 240
ccgcatgtcc gccttgcttc tacacgagtg agtaccata ttcataatcg atcatct 297

<210> 2951
<211> 439
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-C5
<400> 2951

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gcgctaggtt ttgccacac cgctctcgtc ctccgcgaag atgccgaaga acaagggtaa 120
gggaggcaag aaccggaagc gtggaaagaa cgaggctgac gacgacaagc gcgagctcgt 180
cttcaaggaa gacgggcagg agtatgcgca ggtgaccgg atgctcggca acgggcgggtg 240
cgaggccacc tgcgtggacg gcacgcgtcg cctctgccat atccggggca agatgcacaa 300
gaagggtgtg atcgcggccg gggacatcgt cctcgtcggc ctccgcgact accaggacga 360
caaggccgac gtcacctca agtacatgaa cgacgaagcg cgctgtctca aggcctacgg 420
tgagcttccc gagacgctc 439

<210> 2952
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C6

<400> 2952

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actacgctcc ggggtccagc ggcgccggtg ccggaggagg tggcctcgcc gactgggcgc 120
gccaccgcaa gcgtcgccgt gaggagctcc tcaaggagaa agaattctaca actcacatgt 180
cagaccaaac aaattgcaat gaagttgaag cagaagagtg tgatgcgtat gaagaaaatc 240
aagaggaacc tgtagcaatg gtagaagaat ctccaccoga tgttggccaa gatggtgatg 300
atgggcaagg tattgattcg tcttggactg tggttggtac accagtttta cgagtcaaga 360
caatttatat cagttcagcg attcttgctg cgaagagtcc tttctttatc aagcttttct 420
aaaacggcat gaaagaatcg 440
```

<210> 2953
 <211> 392
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C7

<400> 2953

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aattccccgg cgcaccacg cgtccaccgg gaactgcata ccgatgtcct cgccggggat 60
gactacgctc cgggggtccag cggtgccggt gccggatgag gtggcctcgc cactgggcgc 120
cgccatcgca aacgtcgccg tgaggagctc ctcaacgaga aacgaatcta caactcacat 180
gtcacaccaa acaaattgca atgaacttga agcacaagag tgtggtgcgt atgaagaaac 240
tcaagaggaa cctgtatcaa tggtagaaga gtctccaccc gatgttggcc aagatggtga 300
tgatgggcaa tgtattgatt cgtcttggac tgtggttggg acaccagttt tactagtag 360
gataatttag atcagttcat cgattcttgc tg 392
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<210> 2954
 <211> 446
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-C9

<400> 2954

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tgctcgtggca gacgtacgtc gatgagcacc tcatgtgcga gatcgagggc caccacctga 180

gctctgccgc catagtcggc cacgacggcg ccgtttgggc ccagagcacc gcattcccac 240

agttcaagcc agaggagatg accaacaatca ttaaggactt cgacgagcct gggtttcttg 300

ccccgatcgg cctcttccct ggccccacca agtacatggt catccaaggc gagcccggcg 360

ctgtcatccg cggaagaag ggatctggag gcataactgt gaagaagacc ggacaggcgc 420

tggtgatcgg catctacgac gagccc 446

<210> 2955

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D1

<400> 2955

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gaagatgaag gccaggaagg agatcggcgg gctggtggac ctcgtcaacg atatttcggc 120

caagtcagag gagagcctaa gggtttagcaa ccaaaacatg cccagcaggg cgctgacgtt 180

cagtcagctg agcgccgcaa cggacggggt cagttcgcag aacctgctcg gagaaggcgg 240

ctttggacgg gtgtacaaag ggctcctcga ggacaccgga gaggttatcg ccgtgaagca 300

gctgaacagg gacgggctcc agggcaacgg cgagttcctc gtcgaggtgc tgatgctcag 360

cctcctgcac caccgaacc tcgtcaagct gctgggctac agcaccgact ccaaccagcg 420

gatcctggtc tacgagtaca tgccc 445

<210> 2956

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D10

<400> 2956

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gaaggcaact attgatgagg gaagatggca agaaacaagt ttgcattgtt ggtctacagg 120
aatttgaggt ttctgatgtt cagattgtca aggaatatat tgaaagaggg aatgcagcca 180
ggagcacagg gtcaacaggg gccaatgagg aatcatcaag gtcacacgct attctgcaac 240
tggctgtgaa gaagcatatc atagtaaaag ataccaggag acagagagat cgtgatgcta 300
atgaagctaa aaatacaaag gctgtgggga aaatatcatt tattgatctt gctggaagtg 360
agcgtggtgc tgatactact gataatgata gacagacaaa gat 403

<210> 2957

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D12

<400> 2957

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catgcatgca tgtgacgacc tctcctcctc gctgtctctc tgtatctgca actgcaagca 120
aggaaattaa ttaaaagaag atcggcgcca tggcggcaac gacgacgggg atgcagatga 180
tgcaggcggc ggcgttgctg ctgtgcttgg ttgtgttggc ggcgtctacg cgggtcgcgc 240
tgggcaactg ccgcgacgac tgcattgctg catgcaacgg ctggaccatc gtctgccagc 300
tctcctgtgc cagcgcattg tacggagaag tcgggatcac aaccttaggt acgtcggctg 360
tattagcgaa agcagaagcg cctgcatcag caccacaagc agcacaagag cgaggcgccg 420
ccgccggcgt gtccgcgctc 440

<210> 2958

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D4

<400> 2958

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 tcacgtctaa gtgcgctaac agcctgccat gtcagggcgt gcacctcgtc aacgtcgaca 120
 tgtagtaciaa tggatacggg aacaagacca tggacgtctg catgaatgac atcggcaagt 180
 ccatcggatt ggcaaacgag ctggcgtgca tttgaaccaa ttgactatca ttcatatatt 240
 atgtactatg tttgtgcacg tgcgttgaca ctgaagttat acattagtat caccctcatc 300
 tacgtaacga tagatatcac tatgagattc aaagtaagat acaaagaggg cggtcgctct 360
 acaggatcta aa 372

<210> 2959
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-D7

<400> 2959

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 tcctcgaaag atgccaagga gagatccacg tccatgagga agcttataat cgcagtgatc 180
 ctttgcata tattcatgac ggtggaagtg gtcgggggca tcaaagcaaa cagtcttgcc 240
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 tctctctggg ctgctggatg ggaagcaaca ccgcagcagt catatgggtt cttccggatt 360
 gagattcttg gtgccttggt ctccattcag ctcatatggc tacttgctgg catactggta 420
 tatg 424

<210> 2960
 <211> 448
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-E1

<400> 2960

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 ctgtccggag aggaggggca ggaggaggcc gcaccaaata tatctgggga tcggagcgcg 120

ggcgacaaga tgccacgcgg cggcaagccc ggggttcgt cgaagccgaa cccgttcgac 180
tcggactcgg actcggagtc cagcaataag ccggcgaaca agtcgggggc gtcgtcgtac 240
cagggccccc cgcacgcaa gaagcgggtac aaggacgggt tccgggactc gggcgggctg 300
gagaaccagt cgtgacagga gctggagcac tacgcggcgt acaaggccga ggagacgacg 360
gacgcgctcg ccggctgcct ggcacatgcc gaggacatca ggcangacgc cagcgacacg 420
ctgatcacgc tgcacaagca gggggagc 448

<210> 2961
<211> 446
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-E10
<400> 2961

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caacatcctg ctcaagggcc ttgttggcat cggtgacctc gattctgcgc tgaagggtgct 180
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cagtgggcgt aggccagatg ctactatgta cacagtgtc atagatgggt attgccatcg 360
taggaagttg caagatgcag caaggatcat ggatgagatg ggagctgctg ggggtgcagcc 420
aaatgatgtt acatactctg tggatga 446

<210> 2962
<211> 394
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-E11
<400> 2962

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cgatcgaatt aggcgccttc ttcgtccac gctccgtctt tatttgtaat ctgaagctta 120
caggaacatt tgagtggatc atggacggat tggtaggcct cttgaaagtc cgggtggtga 180

ggggcatcaa cettgcctac cgcgacgcaa gaggcagcga tccgtatgtc gtccctacgac 240
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 aggagctaac tctgaccgtc aaagatccca gcctacctct gaagctggag gtgttcgaca 360
 aggacacgtt cagcagggac gaaccgatgg ggga 394

<210> 2963
 <211> 372
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-E12
 <400> 2963

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 cgtcctcccg tggatgatga cgatgatatc tttgtttggt gtgtcggttt attgtttctt 180
 cttcttttgg tcctgtatat gctgaattta ttacacccac acataactgt acgttggcag 240
 cagctatata atatatcggt ttttgttgtt aaaaaaaaaa aaaaaaaaaa aaaaaataa 300
 aaaaaaaaaa aaaaaataa aaaatgtaaa acaatgaaac tcacaaaaaa gaagtaaaaa 360
 aaaaggggcg gc 372

<210> 2964
 <211> 431
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-006-Q1-E1-E5
 <400> 2964

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 tagcaccaca cgcaggtacg aagaaggcga cgaacatggc gaggctggcc ttggtagcgg 120
 cggtggttct gtgcctcctg ttagcgacag ggccgcaggg ggccatcagc gccgagggga 180
 tgggtgcatt tgacaatttg atcagctgca aggtactggg caactgcgac aagaacctgg 240
 gccccgaggc ctcccgccca gggaaacccg ccaacgacta caccgcggc tgcaaccgca 300
 tcaccggctg tcgcggctga tcatatctct ctggtcgatg tgcgcgcaat gtcaatgtcg 360

cacgcgcgtg caggtaccag gcctcagcgt gtggtgccgc gtgtgtgtat atattacaca 420
catgcattat a 431

<210> 2965
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E6

<400> 2965

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gaggagatga ccaacatcat gaaggacttc gacgagcccg ggttcctggc cccgaccggc 120
ctcttcctcg gccccaccaa gtacatggtc atccaaggcg agcccggcgc tgtcatccgc 180
gggaagaagg gatctggagg cataactgtg aagaagacag ggcaagcgat ggtggtcggc 240
atctacgacg agcccatgac ccccggccag tgcaacatgg tggtcgagag gctcggcgac 300
tacctcgtag agcaaggcct gtgaatggat tcatttaacc tcgctcgctc gcttgtccat 360
ggttcgagca tccagcagca acgataccaa catcagcatt atttaattgg tagcctcctc 420
tagctacgca cgca 434

<210> 2966
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E7

<400> 2966

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gttgttggct gccggccggg tactaccgcc tgcacgagca gcggctagcc acagcccaca 120
gacagacgac gtcaggtctt ggcaggtgtg caagcagaca gagctcgctc ggtcgccatg 180
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ctgctcaccg ccgacggcgt ctctgaccac aagacctgct tcaaatgcag ccaactgcaag 300
ggcgtcctct cgattagcag ctactcttcc atggacggcg ttctgtactg caagacgcac 360
tttgaacagc tcttcaagga aacgggggaac ttctccagga aattccaagg tggaggtgga 420

gcattcttcaa a

431

<210> 2967
<211> 443
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-E8

<400> 2967

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cgaggaggtg gccaggttcc aggagggcgt ccggcagggc gccttcggcc tgctcctcaa 120
ctccgtcgtc ctccggagcca gctccttcct catcgagccc atgtgccgca agctcaccgc 180
caaggtcgtg tgggtcatga gcagcttcct cgtctgcgtc gccatggcct tggtcaccgt 240
cctcagctcc tggtcgctcg gcgacatcgg gggcaacgtg caggacgccg ccgccgtgga 300
taagggcctc aagaccaccg cgctcgccat ctctgtcttc ctccgcttcn cattcgcggt 360
cctatgcagc gttccgtccg ccgtgacggc acagctggcg gcggccaagg gcggccggca 420
agggtctgtc acgggggtcc tca 443

<210> 2968
<211> 441
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-E9

<400> 2968

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gaataacaca gttgagcgcg acgatgggat cctcgcctaa taacatcatg gtcgtgggtg 120
tcgtccttgc agcgtcgtc gccggcgggt catgcgggcc cccgaaggtg ccgcccggtc 180
ccaacatcac caccaactac aacggcaagt ggctcaccgc cagggccacc tggtacggtc 240
agcccaacgg tgccggcgct cctgacaacg gcggtgcgtg cgggatcaag aacgtgaacc 300
tgccacccta cagcggcatg acggcgtgcg gcaacgtccc catcttcaag gacggcaagg 360
gctgcgggtc atgctacgag gtgagatgca aggaaaaacc tgagtgtcgc ggcaatccag 420

tcacggtgta catcactgac a 441

<210> 2969
<211> 374
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F1

<400> 2969

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gcgtggagcc cgagagcggtg cggttcatgg cgcgggagat cctcaccctc cgccgcctcc 120
gtggccaccc caacgttggtc ggctcgagg gcatcatcac ctcccgtcc tctccctcca 180
tctacctgt cttcgagtac ctcgagcacg acctggccgg cctcagctcc tccccgaca 240
tcaccttcac cgagccccag atcaagtgt acatgagaca gctgctggag gggctggcgc 300
actgccatgc gcgcgggggtg atgcaccggg acatcaagtg cgccaaactg ctgggtaaca 360
acagcggcga gtc 374

<210> 2970
<211> 441
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-F10

<400> 2970

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ataaaatgaa gcttattgcc ttgcgatgca gttagcatca tctactggacg acaacattgt 120
tggttttatt agaacactta atttgtgatg tctcgacata attgccggtc acttaaagga 180
ggagtgggct gctgcatttc tatgaaaact catatgtgag caaatgctac tctcctagt 240
acatctttaa tcattatggt ctcaaaaata ttggacgtaa gctatgacaa catttttctt 300
ttgaagatag aactgtcgt catttgatca accctatcta catgtgggtt gcgatatttc 360
catattatgt ggacagctta cacacagtta aatcagactg gatcaccaat ngatgaatca 420
taagcttgct ctgaacggga a 441

<210> 2971
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F11

<400> 2971

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tctagattag tagtcgtaaa aaacgctggg cacgcggcca atctagagaa gtccaaggag 180
gtgtgcaaga gcatcattga ctattttcag gaaccggggt caagtgattg agttgggggg 240
aaaggagggtg aagccacaat gtgacggttg gaaattctga gctaggacat cgtcctgtga 300
ttggcccgcg gttttgccgt ttccttggca acttgtaatt gtaacaaaag aacctttgta 360
atcacacgga ccatacaagt ctctgtaaa ttgtctgagg gctttctgcg ctcaa 415

<210> 2972
<211> 340
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F12

<400> 2972

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cttgcattcta ttattcaggt tcttgaccca aagctacatg accacctaca aactcttggc 120
ggaagtgact acctttttgc gttccgaatg ttcattggtgc tatttaggcg tgaagtatca 180
tttgagagact ctttatacct ctgggagatg atgtgggctc tagaatacga ccctgacatt 240
ttcttcgcaa catgcgaaga acaagggtgca gtacataaaa ataaagtttc taaatccaaa 300
ctgaaaggac tgcgccattt tggcaagtgg gataaggaca 340

<210> 2973
<211> 443
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-F2

<400> 2973

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cgatgagagc cttgttctct ctggctctct tctgcatcgt gcatgggtgag aatgaagagt 120

caaagggcat cgatgcgaaa gcgtccgggc ctgggtgggtc cttcgacatc accaagttgg 180

gcgcctccgg caatggcaag acagacagca cgaacgctgt gcaggaggca tgggcatcgg 240

tgtgcggcgg cactgggaag cagacaatcc tcatacccaa aggtgacttc cttgtcggac 300

aactcaactt cacaggccct tgcaagggcg acgtgaccat ccaggtggat ggcaatctgc 360

tggcgaccac ggacctaagc cagtacaacg accatggtaa ttggatcgac attctacgtg 420

tggataacct gctcatcacc ggc 443

<210> 2974

<211> 370

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-F3

<400> 2974

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tagttatgga cggattggta ggctcttga aagttcgcgt ggtccgggggt atcaaccttg 120

cctaccgga cgcaagaggc agcgatccgt atgtcgtcct acggcttggc aagaagaaac 180

tgaagacaag cgtgaagaag agatccgtga accccatatg gcaagaggag ctaactctga 240

ccgtcacaga tcccagccaa cactgaagc tggaggtgtt cgacaaggac accttcagca 300

gagacgacnc catgggagac gcngacgtgg acgtggcgcc actgatggag gcggtgagca 360

tgaacccgcg 370

<210> 2975

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-F5

<400> 2975

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acgctccgtc tttatttgta atctgaagct tacaggaaca tttgagtgga tcatggacgg 120
attggtaggc ctcttgaaag tccgggtggg gaggggcatc aaccttgctt accgcgacgc 180
aagaggcagc gatccgtatg tcgtcctacg acttggcaag aagaaactta agacgagcgt 240
gaagaagaga tctgtgaacc ccatctggca cgaggagcta actctgaccg tcacagatcc 300
cagcctagct ctgaagctgg aggtgttcga caaggacacg ttcagcaggg acgacccgat 360
gggggacgcg gaaatcgact tggcgccgct ggtggaggcg gcgaacgcaa gcccgaggcg 420
gagcctga 428

<210> 2976
<211> 434
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-F6
<400> 2976

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gagggccacg gcttcgccgt cgactggtgg gccgtcggcg tgctcgctta cgagatggcg 120
ttcggggcgga cgccgttcaa gggccagaac cgcaaggaga cgttccggaa cgtgctgcag 180
caggagctcg agttcccggg ggacacccgg tggcggacgc cggagctcgc ggatctcatc 240
tcgggcctgc tggagcggga cccgacgagg aggtcgggt acgccggcgg cgccgacgag 300
gtccggggccc acccgttctt cgccggcgtc gcgtgggaca tgctcacgga ggtgtccagg 360
ccgccttaca tcccgccgcc ggccgacgaa ggactcncgg acgtcgaagg gtctgacgtg 420
aggggccact tcaa 434

<210> 2977
<211> 437
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-F7
<400> 2977

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acctcctcct cccccgccg ccaacaactc agccgccgca accgccacat cagccatggg 120
cgctgcaca tccaatccca acacgcttga tgggcaggcc ccagctgagg ccgcagtctc 180
cacacccaac gttgcgccc acgccactct aatctccgtt gacgttgccg ctgatgaaca 240
cgtacctgat aaagtgggtg tggacgagcc ggctgcccgc gccgacgttg agcatcagac 300
ggctaatagag gtggtcgctc cagaggcggc cgtcgccgag cccgatcaca aggaggagga 360
acccttggat aaaaccgtcg tcaaggagga caaccacgcg gaagccgccca ttgcagagga 420
aaaggtctcc accgccg 437

<210> 2978
<211> 453
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-F8
<400> 2978

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acgctcaaaa gcgggggcag caatgcagac ctcatgtcgg agctatccgc ggcggaacac 120
ttcgccaccg actgccccga caccttcgac gagcgaccag acctcaactc acccataccc 180
ggtgcacagc gccacgtcaa ccgctcatc agcaactgcc ttgacctagc agccaccatt 240
aaggaacaac cctagatgcc tatgatgtgg aactgacag aaatttatct acaactggct 300
gaagaagaaa cagtcccaca tctacttca aatttacgac atgtctgcac atactaataa 360
ttgtgtggct tatcgatttt ggctcttttt atatcctttg atattgctgg ggcatacaaa 420
gcaatcatcg gttattaata cgtggatacg tgt 453

<210> 2979
<211> 417
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-F9
<400> 2979

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ataccgcct gccccggctg gtctcctcc cggggcgctc ccgccgcggc ggaaaaaact 120

tccgccggag ccgaaggcga aggcaacggc ggtttgaagg ccgttggcga agcggccggc 180
 ggcggtatac caacccaac cgaggaagcc aatcacacc gccctctgga gacacgaaga 240
 cccctttcga cacgcggcgg tcaactcaacc catagcgagg cagcgcaatc cacgcgtgcc 300
 gctgaggaga cgacgacgac tctttcgaca ggcggcgggg gttacggcgg tgcaaccggc 360
 aaggcttcca caagcggcgg cgggctggac cccgacggcg acccagaggt tgggctg 417

<210> 2980
 <211> 337
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-057-Q1-E1-E4

<400> 2980

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 acgagctang gggctcgttt ctgtccaaaa actactactg tgatttcgta acaagccagg 120
 ctgaatttta tgccgtttca gattcgtgga gaaatgcaag taccctgagg atggttcacc 180
 gcctagatcc ttgagatata tcggaagtat ggttgctgat gtccatcgca ccttactata 240
 cgggggcata tttttgtacc cagcagacca gaagagtcca aacgggaaac tacgcgttct 300
 gtatgaagtc ttcccgatgt cattcctgat ggaacaa 337

<210> 2981
 <211> 423
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-E6

<400> 2981

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 agcaaggggg cccctttctg taccagagcc tcagatcgtg atttcgtcat aagccacgct 120
 gaattttatg ccgtttcaga ttcgtggata agtgcaagta tcctgaagat gggtcaccgc 180
 ctagatccct gagatatatc ggtagtatgg ttgctgatgt ccacgcacc ttactagacg 240
 ggggcatatt tttgtacca gcagaccaga agagtccaga cgggaaacta cgcgttctgt 300

atgaagtctt cccgatgtca ttcctgatgg aacaagctgg aggccaggct ttcacaggca 360
aacaaagggg gtgtttcagt ttcccggttct cagaccccaa tccccaactg aaaaatcttg 420
atg 423

<210> 2982
<211> 281
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-057-Q1-E1-E7
<400> 2982

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ctgaatactt caacgtcacc gacgggggtgt tcagctacaa ccagatgggc gacgtgcccc 120
ccgccgtgaa cgggtcccctc catgtcatcc ccaatgtcat caccgccgag ttccgcacct 180
tcacgcgagat cgtcttcgag aaccccgaga agagcacaaa ctccctccac gtctatggct 240
aggccttctt cggcgctggc gatgggcccc gggaagtggg c 281

<210> 2983
<211> 431
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-057-Q1-E1-E8
<400> 2983

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tctctcttct tcttcttctt caatcctccc tccccgcgt ggagttggag gagggagagg 120
ggacaagctt tccggcgccg acgccgacgc ggaccccgcg ccgacacgat ccggtggatc 180
aagtgcacat cacctttagg gaggccctt ggacagcagt ttgtgctgca aattctatat 240
agctctgtcg cagcatggcc tcggtgggcg tggcacgctc ttctttggga tttcagaatg 300
gcacaagttc tagcaatgac ccagatcgtc ttcccaacga gttgggcagt atgagcataa 360
gggacgacaa ggacgttgaa gatattgtag tcaatggcaa tggggcgagg cctggtcata 420
tcatagtgc c 431

<210> 2984

<211> 182
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-E9

 <400> 2984

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 catgcattgc cgatcgccga cgtaccatcg cgccaacgag agagagggat ggagatgatg 120
 acgaggatcc tcagcgggtgc gcgcgcgct gtcggcatgt cgggaaccgc ggtgggggag 180
 tc 182

<210> 2985
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-F1

 <400> 2985

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 gccttgcttc ctctcctccc ggttcccgaa taaaatttcc tggaccggga gcgcgcagcg 120
 cgctcccccg cctcccaagg aaacttatct aagcattccg gcggtcgatc catcttcccc 180
 tccagggaga gcaaggaata atcaatcaac cggccagtga aacgttagga ggaggaggag 240
 agccggagtc cgtccagcgc ggcgcgggtt gatcccttgc gtctccgccc ctgcccctgc 300
 gcatggccca acagtgccaa ccaagcacat cggtcacggg tcagtcagcc acgggagaag 360
 gcgcgacgat cgatatggcc aaaagtggac cgacagtaat ggcggcagca ggcgcccgga 420
 agcagcagtc aaattgtctg c 441

<210> 2986
 <211> 416
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-F10

 <400> 2986

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gacgggagggc gagggcgcgcg cgagccggcg ggcgcaatcg gattttgggga ggcaaaagga 120
aaattccgga gagcagttcc ttcccgctc cccatttcct ccggatagat ttgggtttgt 180
cctgcgtcga ttagtccggc gcccgaaacc gcaccaatcc attcgccgag ggatcgagca 240
agcgaggcgt ggaatcgag gcggtattcc ctgcctgcct cttcttctcc tccgcctgtt 300
cttgccgcg tctccccctc cgccgatct ggactcgaca gatcattatt tttttgttgg 360
catacattcc caaccttgat ataaagacct ccttcattca gaagcctgtg ttttgg 416

<210> 2987

<211> 283

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F2

<400> 2987

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aattgcgtgg agccggagcg cacaccgcg tcacccacct cacaaggaga cgtatctaga 120
cattccggcg gtcgatccat cttcccgctg atggagagca aggaatagtc gatgtacagg 180
ggagtgtgac gttaggatga ggaggagatg ttgtgtccgt cgagcgcggc gcaggttgcc 240
tcgttgcgtc gcaggcggtg cggcggtgaca gtggggagga atg 283

<210> 2988

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F3

<400> 2988

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cgctcatcg accacgcccc cttccaggct ccgctctcca tgggtctcct ctcaaacagg 120
attgggaggg agagcctcaa ggcgggggat catatctact cctggagggc ggcgtgggtc 180
tacgcgcatac acggaatata tgtgggcat gataaggtga tccatttcac aagaggaaga 240
ggacaggagg tcggaacagg aactgtcgtc gatattatc ttgtgagttc caccacaaa 300
cgaagcaaca cgcttgccc ggtgtgcacc gacgaaacca gcgacagcag cacagagacg 360

aacggcggtgg tatcctcctg cctcagctgc ttctagctg ggggtgctct ctaccgtttc 420
gagtacgcag tcaac 435

<210> 2989
<211> 188
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F5

<400> 2989

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aggacgtcga actacgagga cgtggcgcggt ggaccgcgct cagacacgaa tgggagggag 120
agctccaagg acggcggtatg gtctctacac ctggacgggc agggtagagt caacgcatat 180
tcaggaat 188

<210> 2990
<211> 412
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-057-Q1-E1-F6

<400> 2990

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tgtaggtttc tgaatcatag cttggcgatg cctgaggcta gacaaatact gagctagcct 120
tcagaaaaaa aagaaaagaa agagattgag aagcagggag aaaaaatggc actggcccat 180
tgaggaagct tgagaaccag ttaacaagaa ttgccaacat attcttggac aatcttggtta 240
acagagtttt aaggtttcnc ancagacatt tttcgagtcc aggaagagcg cgtgcaacca 300
ccacattcat ataattaata agcaaggttc agagaaaaag caaatgggca caaagaatga 360
ataaagggat cctgaagccg ttccgccata tctcaaccat catggatggt aa 412

<210> 2991
<211> 334
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F7

<400> 2991

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ccacaagggc ctgcactact tcaagggctg cctcatccgg ggcagcgtcg acttcatctt 120

cggttcggc cgcagcttct acaaggactg ccgcatcgag tcggtggtea aggaggtggc 180

ggtgctgacg gcgcagcagc gttccaagtc catcgagggc gccatcgaca ccggcttctc 240

gttcaagaac tgcagcatcg ggggcgtcaa gggcggccag atctacctgg gccgcgcctg 300

gggggactcc tcccgggtcg tctactcgta cacg 334

<210> 2992

<211> 86

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F8

<400> 2992

tactccctat agtgagtcgt attaatgcgc agcggcgacg gcgggcggcc ggcgcccgcg 60

acgtccgttg tggcgccgt ggggcc 86

<210> 2993

<211> 316

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-F9

<400> 2993

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caagacctac tacctggacg ccgccgacaa cctcggcgcc tgcaagcgcg ccatcggtt 180

ccgcgacgcc gtcaccatcc gcgccacgat tagcatggtg gcgcaggaca cgcataactg 240

cgacgaggag ttcataaacg ccgtctccaa gaaccgcatg gaggaccaca acaggtcgct 300

catcgagatg tccgag 316

<210> 2994

<211> 421

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G1

<400> 2994

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 ctgctttacg ctgtgccga gaaatgattg gggtaacga tggatccaag aacttgatcc 120
 gtgctattaa caacaggctc agtgctctgt catttcacat caggaggtat tattgggttg 180
 atatgaagaa gataaatgag atttatcgct ataagactga ggagtattcc catgatgcta 240
 ttaacaaatt caacatctac ccagagcaaa ttccatcttg gcttgacagac tggattcctg 300
 tgaaaggcgg ttaccttata ggcaatctgc agccagctca catggatttc aggtttttct 360
 ccctaaggaa tctgtgggag attgtcccat ctcttgctac tcaaaggcaa gcagagggta 420
 t 421

<210> 2995
 <211> 133
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G10

<400> 2995

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 gtccctctgt tccgcgccga cagtgtcggc ctgcggccca tgctgcggac gagcgcggtat 120
 ggcattgccg cgt 133

<210> 2996
 <211> 435
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-057-Q1-E1-G11

<400> 2996

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aacaactccg tgtcactggg tttgcgaatt gctgatttct ctgggtcatgc aagaaatata 180
catttctctct tctacttgga ctctgataca gctatgtctg tagctgctga aatgggtgaa 240
caattggagt tagcggactg cgacgttact ttcattgctg attttattga ctttttgata 300
gtgaatctta ttccgggttg gagacctgta aatgatgcag cagcgaactc gtataggcga 360
tctgaaagtg aacttgcagt caattcncat cagaacatct caaagttggg acctgattat 420
gcattaattg atggg 435

<210> 2997
<211> 430
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-057-Q1-E1-G12

<400> 2997
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gcgggtggcgt cagctgaggg ggcacgggg gacgtggaga tgggtgttct caaggccgcg 120
gtggccaaag gcgcagtgtg cttggacggc agcccaccgg tgtaccattt ctctcccggc 180
tccggttctg gcgccaaata ctgggtcgtc cacatggagg gaggagggtg gtgcaggaat 240
cctgatgagt gtgctgtccg caagggcaac ttcaggggct cctccaaatt tatgaagcca 300
ctctcgtttt cagggatatt angcggcaac caaaaatcca atcctgattt ctacaactgg 360
aatagagtaa agatcagata ctgtgatggg tcatcattta ctgggtgacgt tgaggctgtg 420
gacactgcga 430

<210> 2998
<211> 187
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G2

<400> 2998
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atcgacctga ccgccgcgca gccgctcagc cggggcggca cggcggggtg cagcccagaga 120
ggcagcgggtg acttgagcat gtggtccctg gggaaagacc gcggcttcgt catgtccgcc 180

gcggtcc

187

<210> 2999
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G3

<400> 2999

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cgtggccttg ctgagcgtgg ccctagtggg cctgctcctc tgccacctcg ccaccaccgc 120
ctccgcccac cagaaagaca tccacgtcct cggcagcgtc gacggctcca gcgacggcag 180
cagccccgag tccgaaggcc gcgtcgtcta cgcgacatg aagctggctg atacggaatc 240
cgatgcgccg gcgcggcgcc cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc 300
gtccagccaa gcaaggtggt caaaaccgag aactaattaa gggctcgatc gtgtgtcagg 360
ctactactgt tcttgccata attatatata gatacgcaaa gtgtggccaa gcctaccac 420
atgca 425

<210> 3000
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G4

<400> 3000

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ccatcatcag ccagggaac cgctacatcg cgccgcccac ccttgccgag aagcaggtca 120
ccaagcagca tgacacgccg gagtcggtgt ggaagaactg ggtgtggcac tccgagaacg 180
acctcttcat ggaaggcgcc tacttcaccg tcaccggcgg ccagatcaac aggcagttca 240
acaagaagga cctcatcaag ccaggaacg ggtcctacgt caccaggctc acgcgctacg 300
ccggctccct cgctgcacg cccggcaagc cctgctagat caagccacca gcgaggacgg 360
ccgacgacca gaagcagacc atgcattcgc cggctcgcca tgtaagaaac agggga 416

<210> 3001
 <211> 428
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-057-Q1-E1-G6

 <400> 3001

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 tccctcaggc ctttgcccg ctagcgctg tttacgggtg cacgtacatg ctgaacaagc 120
 cagaatgcaa ggctcgagttt gatgagagtg gaaaagcgta tggagtcact tctgaagggg 180
 agaccgcaa gtgcaagaag atcgtctgcg atccttcgta tttgccagac aaggtgaaga 240
 aggttgaag ggtggcccg gcgatatgca tcatgaagca tccgatcccg gacaccaagg 300
 actcgcactc cgtgcagatc atcctcncca agaagcagct aaagcgcaaa tccgacatgt 360
 acgtgttctg ctgctcctac gencacaacg tcgcgccccaa aggcaagtcc atcgccttcg 420
 tctccacg 428

<210> 3002
 <211> 309
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-G7

 <400> 3002

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 cctgagcgct gttgtacgtg gcacgtacat gctgtcaca gccatagtgc aaagtcgagt 120
 ttggtggtat tggtaaatacg tatgggggtca cttctgagcg ggagaccgcc agatgcatga 180
 agatcatctg cgatccttcg tatttgccat gcaaggtgaa gaaagttgga aggggtggccc 240
 acgccatatg catcactaag catccgatcc cggacaccat tgactcgac tccgtgcaga 300
 tcatcctcc 309

<210> 3003
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-G8

<400> 3003

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gaaggggtcc gacacatacg agcccttgaa gcactcctgg ggcgccatct ggaggaagga 180
cagcgacaaa ccgcttaagg gacccctcac cgteccgctc actaccgatg gaggcaccaa 240
gtccgtctac gacgatgtca tccttgccaa ctggaaggcc aacaccgcct acaccgccaa 300
ataattaact ttagtgctga caatacttta agccgaccta tgctagctat actagattgg 360
gttggatccc aagcaatgca ttacacatgc atgcattgga ccgtgatatc tatttgctac 420
cactacc 427

<210> 3004

<211> 408

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-H10

<400> 3004

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ggcttggatga attggaggag aaggtagagg caattgaagc aaagccatcc caagtgccat 120
ttgaaaagca ggaattgttg catactttcg ttaaccgcgt ggggtgtgttg gaagctgaac 180
taatttctat gaagaaggtc ttgtatgaga cattggttcg gcaggatgag ctgcttgcat 240
atattgacca acgacgggca gccaaatttt gtcggcagaa gttctgcttc tgagtgtctga 300
agtacctgcc acctatgttc ttctattcgg agttggcatg ctgctattgt ggacacagaa 360
tacttgcaaa tatcttcata ttttgttgcg gtgtanagaa ttgcaata 408

<210> 3005

<211> 428

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-057-Q1-E1-H12

<400> 3005

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gagcccatth tgccggccgc gttgccctcc cccgtcgcgg cgcccggccg ccgcggcaag 180

ggtggtaagc gcaagatcaa gccatcagcg gcaacccatg aggattccaa catgatcccg 240

cgcaagcccg tcgaagcagt ggtgggtgggt aagggttaagg tggccaagga taccgtgtcc 300

gagtcantcg ctccaangcc cgcccccgtc tccgccctt agttgcgtgt tgggcgcccgc 360

tgcccgcggg gccccgggca acatgcgtcg tgtctgcgcg cgcacgcacg cattgaacgg 420

gagataga 428

<210> 3006

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H4

<400> 3006

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tgtgttccac atgcaaggcc agagtacaca accgttgccc tacctgcagg caagagctgg 120

gcgacattag gtgcctggcg ctggagaaag tcgccgagtc gctggagctc ccctgcaggc 180

actactcgct ggggtgcccc gagatcatgc cttactacag caagataaag cacgaggcgc 240

agtgcggcct gagaccgtac aactgcccct acgccggctc cgagtgcggc gcggccggcg 300

acatcccttc cctcgtctcc cacctgaggg acgaccacaa ggtggacatg cacagcggct 360

gcaccttcaa ccacagatac gtgaaatcca acccgcggga ggtggagaac gccacctgga 420

tgctgacggg gttccac 437

<210> 3007

<211> 62

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H5

<400> 3007

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gc 62

<210> 3008
<211> 413
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-057-Q1-E1-H6

<400> 3008

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ccggcacggc cgctacttc ttcttcgtgt acaagcccaa ggccgcgtcc tactccgtga 180
gcaacatgtc cgtctcgcag ttcgacttca gcacctccga cctgacgctg tacgtcaagc 240
tcaccgcctc cgtgcgcgcc gagaacccca acgagatgat caccatcagg tacggcgagg 300
gctcccacac cgtggtctcc taccgaggca cgccgctgtg ctccgggaag ctcccggcct 360
tccttcaggg ctacangaac gtcaccgtca tggacatctc catggagggc cgc 413

<210> 3009
<211> 447
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-057-Q1-E1-H7

<400> 3009

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ttgatgtgtg gatccgtcgc ggctgccgtc aagcatagac accaagaacc agacctcggg 120
gtggatcatc ggggtcgcgg aggtctactg gatgggggtca agaagtatcc gggcaagtgc 180
tctctgggaa ccctgcttat tgctcgccgg atgctagcgc cgccgtggac tgcgcggctc 240
cgagaagtgc aggtcgtcgc gacatatccc aggaaccttc ggacttggaa cgaagctgtc 300
cataatatgg aaagcatgat tgggacgaag gtcgaatcaa ttctgaagct atgcgcaagg 360
aagcttcggc tcagtagcag aaaaaggaac cgacctaaaa aggaaaaggc tatttagtcc 420
tcgatagatt gtccttaagt caattgt 447

<210> 3010
 <211> 435
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-057-Q1-E1-H9

 <400> 3010

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 actgccttct tcaatgataa taactcatca ctggcaagat ctcttgctga cctaatagcaa 120
 gaatctaacc aagaggtacc tgcattggcta ttgcgctatg cagctcgtcc ttcttatggg 180
 ggtgggtggg gtgggaggaa cggcgatca gggggaggga gccgctttgg tggccgtgac 240
 ttccgcaatg attcttcgtc atttggcaag gggggatccc gtgggtgggtg tgactactat 300
 ggtggaggca gcagtgggtg ttatgggtgg ggcgacacg gtggagctgg ggctccgagt 360
 gcctgggatt gatgttacag ttgctcccaa gtagaggggt ctgccaaagt taggtcactt 420
 ttactctag ttcta 435

<210> 3011
 <211> 287
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-058-Q1-E1-A1

 <400> 3011

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 gtgtgctgct gcttccccctg cgtcatgggt gaggtcgcgg tgctcgccac ggtgcgcgcg 180
 cccgcggcgc tgtgccgcaa ggccgccgc gtgcgcaagg gccgcaaggg ctctgcctcc 240
 gggggccagg ccacggagat atacgagctc ctcgtggacg acaccgg 287

<210> 3012
 <211> 400
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A10

<400> 3012

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ggcggacgcg tcgggtccgt ggagagcggc aagttctggt tcccagctca cgtctacaac 120
cgcaagcatt cgcattgttg gttcatgatg tcatgctatg atgcagcgtt catttaccat 180
ttcgatacgg acacattccg tgcaaggtag ccagcacacg gtcgacgaac cgtggtgttg 240
gaggatggcg tgcaatggga cagggtgagg gcaccgcctg ttgacaccct tgcgcatcac 300
ctgcacacct ctgactgcct gcatgatctc tggcccggcg accacatcga gattcagtgg 360
agaacgaata gagaattcgc atacggtctg gtggtatgga 400

<210> 3013

<211> 279

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A11

<400> 3013

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ccccgctgac tggaagttag gtgtcacgta ccaggcatcc aagaatttct aagtagccac 120
ttttctctct cttcttcaac ctgcatatgc ccacaagcaa ccatgcagat gataacatgc 180
atcatgcatg catattcatt ctttcgctca tgcattccga tatggtgccg gagttaaaaa 240
aatgtaaatc aatgtgcaaa ctcaaagac atcttaacc 279

<210> 3014

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A12

<400> 3014

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atacagcatg ctaataacct tgagtgcacg tcgtgctcgt ctgatggcg acgacgtccc 120
tctcggttcc ggaataccat atcaggtcgc aatgggcatg tgcacagtcg cctgcacggt 180

catcacagca gccgccacgg ccacagtggc cctcgttcgc gaaggcacgt gcgcataggg 240
 tgacgagctc ctccctcgggt acgtcaacgg gcgtcggcac attactgggt acctccgtgc 300
 tcaccttctt cgcctactac ctgcagtaaa attaaaggag ggtcagatgg agatgctgct 360
 ggctgccagt gcctgtattc ggttggattc cgttta 396

<210> 3015
 <211> 290
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-058-Q1-E1-A3
 <400> 3015

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 ccctgtgcgc gccacccta tacaaggagt cgtgcgagaa gacactgtcc caggccacca 120
 atgggaccta gaaccccaac gaggtgttcc acaacgtggc caaggtggcg ctggagtcgg 180
 tccacacggc ggtcagacag tccaagtcaa tcggcgatgc caatgccagc gactccatga 240
 ccgagagcgc gcgcgatgac tgcaagatgc tcctggagga cgccgccgac 290

<210> 3016
 <211> 335
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-058-Q1-E1-A4
 <400> 3016

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 gaacgcaagt agccgggaga ttcggaatcc cgcgcgcgag ttgggcctag ccagctggcg 180
 tcgtagccgc actctgggag gcatgtgggt tcgagccgcg gagggtaggg gtaggggcgg 240
 gtttcagttg ttggcctggt gctgtatttc gcgtggtgat ggaatttaat ctcttcgggg 300
 gcgacgggca tggttttaag ggaaaatttt tgggg 335

<210> 3017
 <211> 280
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A5

<400> 3017

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gccatcgag cgaaatagac atgtctgac gggcacagat gtctgggac gcatacgctc 120

gcgaccacct gatgtgcgag atcgacggcc agtacctcgc ggaggaggac atcgtcggcc 180

acgacggtgc cacctgcgag cataacagag cagttccccg agttcaagac cgatgacatg 240

gccaacatca tgaatgactt cgacgagcct atgcacctcg 280

<210> 3018

<211> 277

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A6

<400> 3018

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tccaacgccg gagegccttc ctacggcgcg gcgggcctt cggggggctc cgccgatgcc 180

cccgccggcg cctccgaggg ccctgcgagc gccagcggcc cgtctggtga cgacgcgccg 240

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<211> 280

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A7

<400> 3019

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ggcggcataa ggaagctccg cggcaacgat gacatctcca agtggaggca gctgtggcca 120

acagacgtcc tggagtaagc aggaaccgca tcccttctca caccgacatt gatccatcgc 180

tcaaatgaca cgcctttctt tcatcatcat attgacaaa ttcgtcgtct ctgtcgcgt 240

gttgtaaacg ggtagtaga agaacaatc ccgtagctg

280

<210> 3020

<211> 272

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A8

<400> 3020

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tcgtcgggga cagctgattt cacacgacga gccggcgagc cggccggcat ttcgtcgtcg 120

gatggcgccg gcctcctcct cgcccgccg cgccgcgtgc ctgcctcctgc tctgctcct 180

gtcctcgcg gccgcctcgc cggcgccagc ctgcctccag gctaggcgtg ctctgtcaga 240

tgaccatggg agcggatatg tggcgcgatg gc 272

<210> 3021

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-A9

<400> 3021

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gttgggttca tgatgtcatg ctatgatgca gcgtcagtt acgatttcca tacggacaca 180

ttccgtgcaa ggtaccacc acacggtcga cgaaccgtgg tgttgaggga tggcgtgcaa 240

tgggacaggg tgagggcacc gcctgttgac acccttgccg atgacctgca cacctctgac 300

tgctgcatg agctccggcc cggcgaccac atcgagattc agtggagaag gaacaaagaa 360

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B1

<400> 3022

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cgtccacacg tccgtcttta tttgtaatct gaagcttaca ggaacatttg agtggatcat 120

ggacggattg gtaggcctct tgaaagtccg ggtgggtgagg ggcaccaacc ttgcctaccg 180

cgacgcaaga ggcagcgatc cgtatgtcgt cctacgactt ggcaagaaga aacttaagac 240

gagcgtgaag aagagatctg tgaaccccat ctggcacgag gagctaacct cctggaaacc 300

cccgggggtt tcccc 315

<210> 3023

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B10

<400> 3023

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cacgctccgt ctttatttgt aatctgaagc ttacaggaac atttgagtgg atcatggacg 120

gattggtaag cctcttgaaa gtccgggtgg tgaggggcat caaccttgcc taccgcgacg 180

caagaggcag cgatgcgtat gtcacatag gacttggcaa gaagaagctt acgacgagcg 240

tgaagaagag atctgtgaac cccatctggc acgaggagct aactctgacc gtcacagatc 300

gcagcctagc tctgaagctg gatgtgttcg acaaggacac gttcagcagg gacgaccgca 360

tggggggacgc ggagatcgac gtggcgccgc tgggtgatgc ggcaaacgc 409

<210> 3024

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B11

<400> 3024

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tgcaggagga gaaggctgca atgcagatgg aggcctctgca gtacctgagg atgatggaac 120

agcaggctga ccacgaccac ctggcgattc aggacctgca cgatttgctt acggagaggg 180

agaaagagtt gcttgacttg gacgctgagc tcgcgcactg caggaggctc ctgcagaacg 240
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 gcagaaatcc ggcgatcgaa tgcttggatg gcgcggacct tgtggggagc gccatgtcgc 360
 ttttcgaaga cgagaaggcg ttcatttttg agtccttgag cagactggag gaaaacct 418

<210> 3025
 <211> 406
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B12

<400> 3025

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 cctccgcccc gccccgccct gcccaagctg agttccccca cccccaacaa acaattacta 180
 gagtagctgc attggcgggg aaattaaagc gctagaagct cagcagcaat ggccggagcag 240
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 gacgtggaga tgaagtgcc gttctgccac agcggcttcc tcgaggagat ggagaccgcc 360
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<210> 3026
 <211> 359
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-B3

<400> 3026

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 ggaaaacacg tacattcacc cggcggcaat aatggcctcg gttccggctc cggcgacgac 180
 gaccgccgcc gtcatectat gcctatgctg cgtcctctcc tgtgccggcg ctgacgaccc 240
 gaacctcccc gactacgtca tccagggccg cgtgtactgc gacacctgcc gcgccggggg 300
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<210> 3027
 <211> 300
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-B5

 <400> 3027

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 atggtatggc aagccgacgg gtgccgggtcc cgacgacaac ggtgggtggct gcgggtacaa 240
 ggacgtgaac aagccccctt tcaatagcat gggcgcatgc ggcaacatcc ccattctcaa 300

<210> 3028
 <211> 317
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-B6

 <400> 3028

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 agatgccacg cggcgggaag cccgcgggtt cgtcgaagcc gaaccggttc gactcggact 180
 cggactcgga gtccagcaat aagccggcga acaagtccgg ggcgtcgtcg taccaggccc 240
 ccgccgacgc caagaagcgg tacaaggacg gggtccggga ctcgggcggg ctgggagaga 300
 ccaggttcc cggggggg 317

<210> 3029
 <211> 271
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-B8

 <400> 3029

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ccgtggaaac ccgcccacgc aaccttctac ggcgggcggtg acgggtccgg caccacggcg 120
 ggcgcggtgcg ggtacaagga cacgcgcacg caggggtacg gcgtgcagac ggtggccgtg 180
 agcactgtgc tgttcggtga cggcgcggcc tgcggagggt gctacgaggt gcggtgcgtg 240
 gacagcccta gcgggtgcaa gcccgcgcg g 271

<210> 3030
 <211> 372
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-058-Q1-E1-C1
 <400> 3030

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 agacgcttga ggggcaggcc ccagctgagg ccgccgtctc cacaccaag gttgcgcccc 180
 aggccactcc aatctccgtt gaggttgcggt ctgatgaaca ggtagctgag aagtggtggtg 240
 tggaggagcc ggctgcggcg gccgacgttg agcatcagaa ggctaagtgc gtgctcgctc 300
 cagaggcggg ccgnttccgg nccccccggg gaaagggggc ccccccccc cgggggaaaa 360
 aaaccccccc cc 372

<210> 3031
 <211> 419
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-058-Q1-E1-C11
 <400> 3031

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 gcggcttcgt cgaagccgaa cccgttcgac tcggactcgg actcggagtc cagcaataag 180
 ccggcgaaca agtccggggc gtcgtcgtag caggcccccg ccgacgcaa gaagcggtag 240
 aaggacgggt tccgggactc gggcgggctg gagaaccagt cgggtgcagga gctggagcac 300
 tacgcggcgt acaaggccga ggagacgacg gacgcgctcg ccggctgcct gcgcatcgcc 360

gaggacatca ggcaggacgc cagcgacacg ctgatcacgc tgcacaagca gggggagca 419

<210> 3032
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C12

<400> 3032

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gtcctccatc ctacttgcaa cgtcgatgct ggctgcgctg tttgcggttg gtttgtgcac 120
caccgcgtc accttccagg ttggcaaggg atccaagcct ggccacctga tcctcaccac 180
caatgttgca accatatccg acgtggagat caaagagcac gggggcgatg acttctcctt 240
tacgctcaag gagggcccgga cgggcacctg gacgctcgac accaaggccc cgctcaagta 300
ccccctttgc atccgctttg ctgtcaagtc cgggtggctac cgcacgctg acgacgtcat 360
ccccgctgat ttcaaggccg gcaccaccta taagaccaca ctcagcatct aatcag 416

<210> 3033
<211> 313
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C2

<400> 3033

cctgctggta ccgctctaga attcccaggt cgacccaacgc gtccactcgc ctctccatt 60
gaccaacaat taagcctccc cgaccgccac atctattaag tgcagccatg ggtgcctgtg 120
caacgaagcc taagacgctt gaggggaaag cccagctga ggccaccatc tccacacca 180
aggttgcacc tgagaccact accatccaca ttgaggttgc ggcaaaacat gcagtagttg 240
agaaggtgga ggaggacaag gaggaggcac taacagtggc ggcgaaacag gagccagcat 300
ccaccattga gcc 313

<210> 3034
<211> 275
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C5

<400> 3034

ccacgcgtcc gcatatatat attcctgcc aagataaaggt aatggagtcg tcacgcaggt 60
tccagccggc cgatcatctg cttctcctgc tcattgtgtc caccgatatg gcacaggcaa 120
gggaatgcga gaagtacagt gagcgatttg ttggggcatg catgatcgca gacaactgcg 180
ccaatgtgtg ccgcggtgag ggcttcttgg ccggcaggtg cagcaccttc cgccgccgct 240
gcattctgcac taggcagtgc taaacaagat cgctc 275

<210> 3035

<211> 299

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C6

<400> 3035

ggtcaggaat tccccggcgc acccagcgt ccagctcgaa gccgaaggcc tcgtgccttc 60
tcttctctcc tggcatggag gaagtagctg ttctgcctat gatcgttgcc gccgtagtgc 120
tggacaacaa tggcgctgac gcggtctcct gcaactgcat ccctagcgta acaataagcc 180
tagaggagaa agaaaatata aatggggatg ttcccacgat cacctcggcc gcaagcaacg 240
aggaggaggc gttgttcagt gtcggagaat ccaccaagga cgatggccat cgctttgac 299

<210> 3036

<211> 300

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C7

<400> 3036

ccggtcagga attccccggc cgaccacgc gtcagcagg aatcggtggt ctcgaggctt 60
cgtgagctcc tgtcagacgc ggcggtcggg agcaatccga ttctccgggt gatggccggc 120
accgtcttca tgcacgaacg cgattacgcc gaggtcttca agcacaccaa ctccggtggc 180
agcatggagc tgcttgcgct gaatgttcag atataccttc aatgaacag gacggaccac 240
gcagagaagc agctcagggt gatgcagcag ctggacgaag accacacgct gacgcagctc 300

<210> 3037
 <211> 458
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-A12

 <400> 3037

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 gggagtaaag gcgcaagaaa gaaacccaaa gcaattgacg ggaatcggaa aaaggggtgg 120
 atcacgtaaa ttaatccgat gtaaaccgag aaccttacct ctccaagaag gtgttgacg 180
 gctgtcgaaa gaacgtgctg tgaagtgaga gaacgtacga gaaagccaag tgaggaaaag 240
 aaggcaagta gagggcgggc cgagaaagga gagggcgtaa gacgtgatac agagtaggaa 300
 gaaaagagaa gagagctaga aaggaggtaa aagaagagta aaaggactag aagaggtacg 360
 gaattcacga ggaaggagcg tgaaggaagg aggaatccca agtaatcgag gaagaaaaag 420
 cttcggtgaa agcgtgaacg gattttgtac acactgcc 458

<210> 3038
 <211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-A2

 <400> 3038

 gggtcgagcc acgcgtccgg aataaactat ggggcaagcc ttcccacggc ttgtcctcct 60
 cgccctcgtg gcgttggtgt ctgccggcct cttcccgcag gcgttaggga acggcaaggg 120
 caaggtgcat ggcggcggtg ccgtcaacct gctggttgcc ggcattctgt ctcgcgcccc 180
 attcccagag gtttgcaagg ccacagccgg gcgccatgca tccaagtacc cggtcatcga 240
 ccatttggcc gtgctgaaca tgcaggtggc cgcgttcgcc aagcgcacag cgcaggcgcg 300
 gaagcacgtc gcggtggcgg cccgcactat tccaccgccg caggcacagg ccctcagaac 360
 ctgcgacacg atgtacatga acacgcagga cgccatcgcc g 401

<210> 3039
 <211> 395

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-A3

 <400> 3039

 ccgggtcgac ccacgcgtcc atctgggggtt cacctgctcc aatggctggt ctttctgctg 60
 ctgatgcttc cccggtctca gctatcgggt ttgagggtta tgagaagcgc cttgagatca 120
 cattctctga ggcacctgtc tttgtggacc ctcatgggcg tggtttgctg gccctctcca 180
 gggcccagat tgactctggt ctggatcttg cacggtgcac aattgtgtct gagctctcca 240
 acaaggattt cgactcatat gtcctttctg agtcaagctt gtttatctat cctctgaaga 300
 ttgtcatcaa gacctgtggc actaccaagc tcctgtcac cattccaaga atccttgagc 360
 ttgctgaaga gctgtctatg ccacttgctg ctgtg 395

<210> 3040
 <211> 412
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-A4

 <400> 3040

 cgggtcgacc cacgcgtccg aaaacaatgc gatgagagcc ttgttctctc tggctctctt 60
 ctgcatcgtg catggtgaga aggaagagtc aaagggcac gatgcgaaag cgtccgggcc 120
 tgggtgggtcc ttcgacatca ccaagttggg cgcctccggc aatggcaaga cagacagcac 180
 gaaggctgtg caggaggcat gggcatcggc gtgcggcggc actgggaagc agacaatcct 240
 cataccaag ggcgacttcc ttgtcggaca actcaacttc acaggccctt gcaagggcga 300
 cgtgaccatc caggtggatg gcaatctgct ggcgaccacg gacctaagcc agtacaagga 360
 ccatggtaat tggatcgaga ttctacgcgt ggataacctg gtcacacccg gc 412

<210> 3041
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-A5

 <400> 3041

ccgggtcgac ccacgcgtcc attgtcacc acccatcgag gttggggccg ccagcaggtt 60
cagccgttcc tgttcttgat aaaacgagag aaggatggca gtgtttcagg gagctgtcct 120
attcttggtt ctctctctcg tcgcagcaga ggtgggaacc atcgatgccaa aaatgggagt 180
agccatgccc atgcatgcct tgataatgga gaaagcgaaa cagcaggaga cggagaagaa 240
ggaggagaaa agcacggaga aggaagagag tcaatgctta tcgccgagtc tccagttcga 300
gggcttctgc ttcaacagcg acagatgcgc cgagggtgtgc atgaaggaga gctttcccg 360
tggcgagtgc aagcgggacg tggccatgcc c 391

<210> 3042
<211> 425
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-064-Q1-E1-A6
<400> 3042

ccacgcgtcc aggcgcaacc aataatagca agtgtgatca tccgttgatc catcttgcta 60
ataaccctgc gtgcccttcg ttctcgtctc gatcccgacg acgctccctt cggctccggc 120
aaaccacatc aagtcgcgat ggagatgaag aaggtcgcct gcgccgtcct cgcgcgccgc 180
gcctccgcca ccgtggctct cgcgcgcgag gccccggcgc cgcccccac cagcgctctc 240
tcggccgcgt tcccgccgt cggcgccgtg ctggggcgct ccgtgctctc cttcttcgcc 300
tactacctgc agtaaaatta aaggagggtc ggaggagat gctgctggct gccattgcct 360
gtattcgggt ggattccgtt tatatatata tttaagtact ttaatttggg tctgaacatg 420
tccaa 425

<210> 3043
<211> 357
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-064-Q1-E1-A7
<400> 3043

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agccagctcg cgaaaataat gaagagccgc agcatggcat catcggccgc gctcttggtg 120

ctagccctcg cgctagtggc ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga 180
gcgggcgaga gcggcgaggc ggcggaggcg aagaagatcc aggacgactt ctgctcgacg 240
ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca aggagtcttg cgcgctctcc 300
cagcagtcca acctggtgct gtacggcagg atccagtgca agggcaagtg caccgag 357

<210> 3044

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A8

<400> 3044

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catcatggtc gtgggtgtcg tccttgacgc gctcgtcgcc ggcgggtcat gcggggcccc 120
gaagggtccg cccggtccca acatcaccac caactacaac ggcaagtggc tcaccgccag 180
ggccacctgg tacggtcagc ccaacgggtg cggcgctcct gacaacggcg gtgctgtggg 240
gatcaagaac gtgaacctgc caccctacag cggcatgacg gcgtgcggca acgtcccat 300
cttcaaggac ggcaagggct gcgggtcatg ctacgaagtg agatgcaagg aaaaacctga 360
gtgctcgggc aatccagtca cgggtgtacat ca 392

<210> 3045

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-A9

<400> 3045

ggggcccca cgcgtccgta agatcatccg ttgatccatc ttgctaataa gcctgcgtgc 60
ccttcgttct tcctcgtctc gatcccgacg acgctccgtt cggtccggc aaaccacatc 120
aagtcgcgat ggagatgaag aaggctgcct gcgccgtcct cgccgccgcc gcctccgcc 180
ccgtggctct cgccgccgag gccccggcgc ccgccccac cagcgctctc tcggccgcgt 240
tcccggccgt cggcgccgtg ctgggcgcct ccgtgctctc cttcttcgcc tactacctgc 300
agtaaaatta aaggaggatc ggaggagag gctgctggct gccattgcct gtaatcgggt 360

ggactccctt tatagataaa attacgtact ttaatttggg tccgaa

406

<210> 3046

<211> 352

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B1

<400> 3046

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cccggggaca gccagtccaa catggtgacg gcgcaagggc ggacggaccc caacatgccc 120

acgggcatcg tgctccaggg ctgccgcacg gtgccggagc aggcgctctt ccccgaccgc 180

ctccagatcg ccacctacct cggccggccg tggaaggagt acgcgaggac ggtggtgatg 240

gagagcacca tcggcgacct catcaggccg gaaggggtggg cggagtggat gggcgacctc 300

ggcctcaaga cgctctacta cgccgagtac gccaacaccg gcccgggcgc cg 352

<210> 3047

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B11

<400> 3047

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aaaacataaa atatgtcttt tcttttagaa cttttaaaag aaattcgctg gagaggactt 120

tggggaactt ttcaagcagc caaaatgaat agactgggta caatgaagta ctttgtcggc 180

gaagacgagt ttcacaaccg atactttcaa aaagtaaacg atgttatgtt gaaggatcgt 240

tgggtggaat atgcttctaa ggaattcacc cctgacctt attcggtacc tcctgagtgg 300

catgcctggc tgcacatata tatagatgag ccaccacaa aagtaggttt ccagagacca 360

aagtatcaag cacagatcgt cgcaaaccgt acaggcacia cagatgcgta ttttcccaag 420

aacaatctc ttagtaagaa ctttaagggc ttggctaca 459

<210> 3048

<211> 481

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-B12

 <400> 3048

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 cggaacgcgt cgggtgggtcg ttcggtcggc cggatgaagag cagacaaga cgggatgttg 120
 gtgtacaaag acgcttttac aggtgatgaa gtatgttccg acgccatgaa aaacctccat 180
 gaagaggaaa acggtttgct gttggtatgt gactcgtaca acatttccaa aggaggggaa 240
 gattatggga tagaagtaaa caacgatgaa gatgaagaag gaggaggagg aggagcagat 300
 aatgcggtgg aacaagttaa tattgtgggc gagtcgtttg gtttacaacc ttttcccatc 360
 agcaaaaagg actttcaagt aactatcaag cgttatagca aacgagtcaa ggactatttg 420
 gagaagaaca accggataga gtggaaaagt ttatggaagg aatgaagtcg tggttgcca 480
 a 481

<210> 3049
 <211> 409
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-B2

 <400> 3049

 gggctcagacc acgcgtccaa tcgaggatga tgaaatgggg gctcagcagc ggcacgccc 60
 cggattccta ctacgaggtg cggtcagatt gcacggacgg tgtgccccaa aacaagttca 120
 agatcaaggc tggcaaaaca ttaagtgtc ggaaatggca ggctgcattt agtcccgatg 180
 gctgtcttga tattgcctca gtcctaagcc ggatacaaag aggaggtgtc catccgacag 240
 tcagaggaga ggtctgggaa ttcttacttg gttgtttcga ttccagaagt acctttgatg 300
 aaagggaaga gataaggcaa atacggagga tacaatatga cagatggaag gaagattgtc 360
 gacagatgga ttcgcatgtt ggtagcggta aagttatcac agcaccact 409

<210> 3050
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B4

<400> 3050

ggtccagaat taccgggtcg agccacgcgt ccgggaggcc aagagcgcag cggcgaagcc 60
atagccaagc tcacccgatc cagtccttgc cgccccagc gtgccacagc cagtcccgcg 120
ctcagctcag ctcagattca cgagctcgtc tcccagatcc agcttcgttt ggttgaattc 180
tcttcttttg aagtgctggt gggcggcgtg gtttggtgct cttggggccg gcgtgtttct 240
gcgtttctcc ggctatctgc ctgtcttgc gcggcctgcg gcggcggggt ggagatgggg 300
gtggccgggg agaagttcca gctggggacg gtggggggcg tcagcctctc ggtggtgtcc 360
tccgtctcca tcgtcatctg caacaaggct ctcagagct ccctccgctt caactttgcc 420
accac 425

<210> 3051

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B5

<400> 3051

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tcggcggcct cttcaagcca cgggaagacg atgcgctccg cttcgtcgtc cgtgggtggt 120
gcaagtgcaa gcgcaaggca gacagacgcg gcgagaagga gagcagagaa gcccgggtgcc 180
acatccgtgt ggctgcggc cggcggcgcg gttaccaacg ctcgtcgtc taaggatgtg 240
gccatcaggg cagcaaaatc gccatccagc gccgcgcaca agacgaggcc tgctggtgtc 300
gagaaggcag cagcgtcttc tgctgtaaag ctgatgacga tgcctcagaa aacaatggca 360
ggagctggaa aaagtcaagc tgcacctccc gcccg 396

<210> 3052

<211> 398

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-B6

<400> 3052

ccacgcgtcc gaggaact agcttgcagc agtagaatt caagtggggc ttaccatcta 60

tttcacactt cctgcctttt aactggact attctgtgcc aatagagat gctgaacgat 120

gaaatagcta ggaaggggaa gagcaaccga ggaaggaagg caaagaatgc acctaggaga 180

agcaaaataa cgtccatagt ttgccagaa tgtcagggtta ctggaattca cgtcaacgga 240

gatgaacttg agaagccaag cttttcttta tcagagatgt ttcgcttcaa gatgaaagca 300

atcgaagctc acaagcatg gctgaagaga cctgaagtgc ttgaaaactg ttccactggg 360

cttcatttcn ctcagaaca tgtggagaac tctgagga 398

<210> 3053

<211> 267

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-B8

<400> 3053

ccacgcatcc agttcaagca cctcctcttc ccccgccggg caacaactca gccgcgcaa 60

cgcacatc agccatgggc gcctgcgcaa ccaagcccaa gacgcttgag gggcaggccc 120

cagctgacgc cgccgtctcc aaaccagggt tggcgcccgga cgccactcta atctacgtta 180

aggttgetgc cgtccataat ttgcctagac tgtcagcgta ccgcaattca tgtcaagcga 240

tatgcacttg atacaccccc catttct 267

<210> 3054

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C1

<400> 3054

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gggcccggcg cgtcaacacc accggcttca ccgtcccggc gcgcgtcgtg ccggccccgt 120

tgcgcgcggc cctcgccatc gtcttcgagc tcttcgtggg aaactcgacg gccgcgttcg 180

ccgcgcgcgg cggctacgcg ctggccacgc ccgtggccgg cctcctcgcg tacgaagcgt 240

cggcggggcc cgacgcgcgc gtctcgctcc gggcgctcgg cgcgccggtg cgcgtcgagt 300
tcaaggacga cctgtcggcg gcggcggctc tggacaaggg gttcgagtcc gacgccacca 360
ccgcgcggtg cgtgacgttc gcggccagcg ggg 393

<210> 3055

<211> 483

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C12

<400> 3055

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acacacgtta accttggtcc attactacta ggaatgaccc ttcgtaaacc agtctttacc 120
aaagtagaaa aactacaacc cgggacacag gggcacaact tgatcgttca agtgatgaac 180
gtcggtgagg ttatggaaaa agtgagaccg agtggtgaca aactgcaaact cgccgaagtg 240
ctacttgtag atgaaactgg agcgggtatta ttacagcaa ggaacgaaca aatcaaactt 300
tttaaaaagg gagagtgtgt gaccgttcga aacgcaaag tcaatatggt gcgaggcttt 360
attcgtttag tagttgacaa atggggagct attaagccgc ctggaccaac gaaaagtta 420
caaggaccac caaaagtaga aaacaatatt tccaacatag aatatgaact cgtgtaagac 480
act 483

<210> 3056

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C2

<400> 3056

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gtcgggttc cccggttctt gagaggggaa agatgacgcg gacgatatgg atggggaggg 120
acgacaggtt ccagtggtg gaggccgcgc tcggcgctgg ggtcgccgcc gccttcgccg 180
ctgggctcgt cgggggttac ctttccatgc cggactccga ctacagcttc ctcaagctgc 240
cacgtaatct ccaggaactc caaatcctca ctggccatct tgagaactat actatcgact 300

acaccctaca cgtgttggtg ggctactgcc ccgtgtacat cttcatgcag accttcatga 360
tcccaggaac gatattcatg tcaactgcttg ctgggtgctct gtttgggc 408

<210> 3057
<211> 349
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C3

<400> 3057

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ccacaatcat ttcaggcatc atcgacacaa gttactatac actccacatc gtgggcgacc 120
accaggatga gcaccagcac agaatgggcc aggagcacca cactaagggc caggaccacc 180
acaataagga ccacggggag cacaaggagg gcatcatgga taagataaag acaacatgac 240
ctgcgagcta ccgaacttct ccggcaacca caaggacaaa aaccatacgg agaagacagt 300
tcagaacacg tagacataga cgatgcacgg cgaaggccaa gaccatggt 349

<210> 3058
<211> 400
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C4

<400> 3058

gggtcgagcc acgcgtccga agcaccaccc gacgcgacga ttctctctct ccgcccgttc 60
ccaccgatct cacgctctct ctcttctctc gtcgcgtcgg cgtcgccatc gccggccatg 120
ggttgcggtg gctccaagga ggccgtggcc accggcaaca ccagcgccgg cagcaaggtc 180
ctccggagga agtctctctc cgtctccacc ggcgcaagcc acacctccac cacgtcgccg 240
tcgtctctcg gcgtcgtcgt caaggacgtc gtgaaggatg cggcggcggc cggcgagggtg 300
atgacgcccg ccgacgccga gaaacctatc tctgtcgacc ccaaggcaga cgccatcgtg 360
gtgatggacg ccaagaaaga ggagggcaac aacaagggtg 400

<210> 3059
<211> 445
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C6

<400> 3059

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ccgaccacaa ggaggaggaa gccgtggaga agaccgtcgt cgaggaggag aagccagcgg 120

cagcagccca tgcagaggaa aaggtcgcca ccgccgccga gaccacgacg acggtggagg 180

cgaagaagaa cgccgaggag gccgggaagg agaagctggc gcagcaaagc tgatcgactg 240

tccgtgcatg cgtgcccaatt aatataattg gctgatgatg cctgatgttc agtgtgtgat 300

actgtgatca agcaaggaga cgacacttga attctctaca gtttggcata ggtcggggaga 360

gacactctcg accggccaca ccatgtaaca aactaacctt cgatgtctcc caataatttc 420

ctcaacggag ttcttctgat gaaac 445

<210> 3060

<211> 389

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C7

<400> 3060

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taccaacaac agcagcagca agcccacccg ttcgacgaca tggcccgccct cggcgccggc 120

gccgtgttgg cgctcctagt ggcggtcgcg gcggtggccg cgttcctcgc ggtgccggcc 180

tcggcgaaagt ccggggagct gagcgcgatg gggttgctgg cggcgaaggc cggcagcggc 240

gcggggccgc agaagtgctc gggcgcggtg ggcgagtgcg acgtggacga ggcggaggag 300

ctcgggctga gcggcggcgg cctcggctcc gacgacgcgg tcgggcggac gctggcgag 360

cggaagccga ccaaccggta catcagcta 389

<210> 3061

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C8

<400> 3061

ccacgcgtcc agttcctgtc ctctcctctg tccctctacg gtgcttctgc tcgcccggccc 60

aaaatcgcct catcgaccac gcccccttcc aggctcccgt ctccatgggt ctctctctcaa 120

acaggattgg gagggagagc ctcaaggcgg gggatcatat ctactcctgg agggcggcgt 180

gggtctacgc gcatcacgga atatatgtgg gcgatgataa ggtgatccat ttcacaagag 240

gaagaggaca ggaggtcgga acaggaactg tcgtcgatat tattcttctg agttccaccc 300

caaaacgaag caacacgcct tgcccgggtg gcaccgacga aaccagcgac agcagcacag 360

agacgaacgg cgtgggtatcc tcctgtctca gctgcttcct agctgggggt gct 413

<210> 3062

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-C9

<400> 3062

gacccacgtc gtccacagcg tcctcgatcc tcaactgagaa aggttactcc ttcaccacct 60

ctgcggcacg cgaaattgtg ggagacatca acgctcagct tgcatatgtg gctcttgaat 120

acgacgagga gctcgagaat gccaaagacg gctcatcggg ggagaagagc tacgagctgc 180

ctgatgggtc ggtgatcacc attggggcag agaggttcag atgccctgag gtccacttcc 240

agccttcctt cattgggtatg gaagctcctg acatccatga taccacctac aactccatca 300

tgacgtgcca tgctgacatc atgaatgact tgtatggtaa cattgtgctc agtgggtggca 360

ccaccatggt ccttgggtatt gcggaccgta tgagcaacga gatgactgcc c 411

<210> 3063

<211> 389

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-D1

<400> 3063

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cactgaaccc aataatccga tcccacagaa acttttctct cggtccgttc gatcgatcgc 120

tgccgtgtcg tttgccagac accatcagca cccaaaacca tggcctgcaa cctgggtcag 180
 tgcgccaccg ccgccgcggc gaccgtcgcg ccccgacccc ctgcacctgc tgcgtccgcg 240
 tccgtctcct tctccgcgag gaagccggcg ggcggcagcc tgcggctgca gcggcaggcg 300
 tgctgcgagc cgtcgggtggc gccgtcgcg gcggtgttcg cctgcggggc cgcggcgctcg 360
 gggagcgcg cgcacctggc ccccggggg 389

<210> 3064

<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D10

<400> 3064

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 cacaacctcg attggaccgt catacaggaa atgggtttac agtgacgctg ggaagagtga 120
 gggaatgttc cgtgatggac ataaagtgg tattgtttgg acataacaca gtggtaggag 180
 ctgcgggtgg ttcgattatt actgcaaagt tgagtgtcgc caaagggttt attgcacaaa 240
 aaggaaaaca aagtgtatat gcggcagtat ctgcctacta gtgtgtgtca ctagacagaa 300
 tagtgtgttt gtgttgtttg tgtctgtgtt ttccaatgaa agacattgac cactagaact 360
 atgtgaaaaa aaaattacag tcaaccacaa agactatc 398

<210> 3065

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D12

<400> 3065

acggtcaac caggcgtccg caaagtttgg ttcttttctt ggtatgcagt tctacatcca 60
 acatcatcaa atgtgtcagc ggaggtatag aatgattcgc catcgattta cgccatcatt 120
 acgggtacag caccagattc taaaaagatt ataggggatt ctggtcagga cgctacgttg 180
 aacggaactg gtaccgagaa agactacaat gttgactatt catgttcttg tcacatcctg 240
 taagttcagt ttgatacttt ctatctctgc gcatgatact cagcagctat actggttatg 300

cgcagcatga tcgctacttt tgttaactcg gcagccgcta cagatgatac aagcttacct 360
acgcttgtat gc 372

<210> 3066

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D2

<400> 3066

gggtcgagcc acgcgtccga ggcacgtgcg tgcgtgcgta cgtacgcagc ccagggacac 60
cgaccgccgc cgccgcccgc agctcctcct cctcctccga ccctctcatc aaccgcacgt 120
acacgtcctc gctccatggc gggcatgccc acggaaagcg cgacccggcg cttcgccgcc 180
gcgtgcggcg tgctcagcca gtacgtccgg acgaccggcg cgcccgcat gacgccgccg 240
ccgccgttcc tgaagccacc agccgccgcc caggagacga cggtcgcgcc gcgcacgcag 300
cagctgacca tcttctacgg ctggaggggtg gtgggtgctgg acgctgccc ggccgacaag 360
gcggacgagc tgatccgcct cgccgcct 388

<210> 3067

<211> 359

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D3

<400> 3067

gggtcgagcc acgcgtccga cgagatccag aacgtcgaca acctgtccat caacggccac 60
ggcaccatcg acgggcaggg agccctgggtg tggaacaaga acgagtgcc a gcttcctac 120
aactgcaaaa tcttcccaa cagcctgggtg ctggacttcg tgacgaacgc ccagatccgc 180
ggcatcacgc tgctgaacag caagttcttc cacatgaaca tcttcgggag caagaacgtg 240
gtgatcgaca aggtgacgat caaggccccc ggcaacagcc ccaacacgga cggcatccac 300
atcggcgact cgagcaacgt gaccatcagc ggcaccacca tcgccgtcgg cgacgactg 359

<210> 3068

<211> 396

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-D4

 <400> 3068

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 cagcttacca acaacagcag cagcaagccc acccgttcga cgacatggcc cgcctcggcg 120
 ccggcgccgt gttggcgctc ctagtggcgg tcgcggcggt ggccgcgttc ctgcgggtgc 180
 cggcctcggc gaagtccggg gagctgagcg cgatgggggt gctggcgggc aagggcggca 240
 gcggcgcggg cccgcagaag tgctcgggcg cgggtgggcga gtgcgacgtg gacgaggcgg 300
 aggagctcgg gctgagcggc ggcggcctcg gctccgacga cgcggtgcgg cggacgctgg 360
 cgcagcggaa gccgaccaac cgttacatca gctacg 396

<210> 3069
 <211> 426
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-064-Q1-E1-D5

 <400> 3069

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 acaggcccat gcaagggcga cgtgaccatc caggtgaatg gcaatctgct ggcgaccacg 120
 gacctaagcc agtacaagga tcatggtaat tggatcgaga ttctacgcgt ggacaacctt 180
 gtcatcaccc gcaagggaaa gctcgacggg caggggccag ccgtgtggag caagaactcc 240
 tgcgtcaaga agtacgactg caagatcctt cccaactcgc tggatgatga ctctgtgaac 300
 aacggggagg tgtccgggat cacgtgctc aactccaagt tcttcacat gaacatccac 360
 aagtgaagg acatgctgat ccaggacgta aatttgacgg cccccggga acgtccccac 420
 acggac 426

<210> 3070
 <211> 403
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-D6

<400> 3070

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gcagtacagc gagtacaaga actgggtgtg gaagtcgcag gacgacctgt tcctcaacgg 120
cgccttcttc aaccagtccg gcggccagaa cgagcgcaag tacgacaggc tcgacctcat 180
ccaggccaag ggcgccagc acgcccagtc gctcaccagg tacgccggcg cgctcaactg 240
ccgcgtcggc aggaagtgtc agtgcggtgtg cagctctagg ctgcagcttt catcattggc 300
gatcgatcgt aacaatgcaa ggttgtgttg tatataactc ttgtgtttgg aatgccgccc 360
gtaattaatg gtcaactcta acactgcttg cctttaanaa aaa 403

<210> 3071

<211> 386

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D7

<400> 3071

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cgccttcttc gtcccacgct ccgtctttat ttgtaatctg aagcttacag gaacatttga 120
gtggatcatg gacggattgg taggcctctt gaaagtcagg gtggtgaggg gcatcaacct 180
tgcctaccgc gacgcaagag gcagcgatcc gtatgtcgtc ctacgacttg gcaagaagaa 240
acttaagacg agcgtgaaga agagatctgt gaaccccatc tggcacgacg agctaactct 300
gaccgtcaca gatcccagcc tagctctgaa gctggagggtg ttcgacaagg acacgttcag 360
cagggacgaa cccattgggg acgcgg 386

<210> 3072

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-D9

<400> 3072

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gtggaagaac atgaatgcac agaagaatgt aagaaatggt tagagtaaca accatgaagg 120
aagtaaaacc gggaatctga gaggaggaaa gccagagtgg aactgagaaa aggtccacac 180
acgagaagtc accaatgggg acaattgggc catgtacacg gaagtatgac ccaat 235

<210> 3073

<211> 262

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E1

<400> 3073

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gtatctcatc cttgatgatg atctagctca ctagtctctt ttaatttcctg cttcattcgc 120
ttttccaaat tcgatttgtt ttcagccaag ttgttttagcg ggacatctct tgtctgatct 180
tctgtctaaa tagagttgga ctcttatata tagaggcctt ccggcacata taatatacgt 240
cggaccaata ttattgtgat ca 262

<210> 3074

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E3

<400> 3074

acccacgcgt ccaactgcacc gtcctcgctg ccgcctcggc ggccaccgtg gcgctcgccg 60
cggaggctcc ggctccgggc cccaccagcg gctcctcgc cgctcgcccc gccgtcggcg 120
ccgccctcgg ggccgccgtc gcctccttct tcgcctacta cattcagtga gccggccgcg 180
gccggctgcc cggaggccga ggaagagacg aagcgggaga gagagtgaca tggctgcgcg 240
cattccgatg cgtgggcatg tttttgattc gacacacctt ttgtcctctt tttctttgtt 300
ccctctttct ccttaattta acgaattgat gcatgccgct gatgttcttc cccctgagag 360
agggattaac acttgatca tcgc 384

<210> 3075

<211> 205

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E5

<400> 3075

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cttgctcgac tgagcatcag gctgtagggc tctttgtgat catcttttgc cagttttctt 120

cttgtagcag aagttgttgg gcatggaact cctgttcctt tcaccaatag aagcataatg 180

atcagcactg tgaaacattt tttcc 205

<210> 3076

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E6

<400> 3076

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acggcctctc ctgctatcgc tgctggtcgc cgtgctagcg gtggccgcgg atgtcgccaa 120

cgccggccac gccaaagccc tgacgcctgg cgggcgcgtg gtacaccaca accacggcaa 180

gttcacggcc gggccgtgga aaccgcacca cgcgaccttc tacggcgggc gggacgggtc 240

cggcaccacg gcgggcgcgt gcgggtacaa ggacacgcgc gcgcaggggt atggcgtgca 300

gacggtggcc gtgagcacgg tgctgttcgg cgacggcgcg gcctgcggcg ggtgctacga 360

ggtgcgctgc gtggacagcc ccagcgggtg caagcccagc g 401

<210> 3077

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-E7

<400> 3077

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gtggtgagcc cccgcgggag acgtgtgtcc cgttgctttt ccttcgcttc gacggccagg 120

ccacctgttg gcctcgcatg gctctgcctc ctgccaagca tccaagctcc ctctcgcccc 180

gcggcccagc gccgcggcgt ctatatagag ccagatccgc gcgatccccg ccaatcggca 240
atcgctgcac cctgcctcaa cttatctagc tcacccgcat ccctgctcgg cactgccttg 300
tgccttctcc tcgcacttgc cttcttcttg tatctagccc cccttcatca caatcaccgg 360
cagcggcgcg ccgtcgtctc aggtgagagc tcca 394

<210> 3078
<211> 400
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-064-Q1-E1-F1
<400> 3078

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ttgccattag ctgtcgcgtc agttacgttt tgcttgccct gttctcgttc ggccttgaca 120
acccggaaat cctccagccc tctagtcccc aacgacgcag gaagcaggat cgagccgaat 180
cctccggaac tcgcgcggcg ggccaaccga cctcacacta ttgatcgagg atgtcgtacg 240
cctacctctt caagtacatc atcatcggcg acacaggcgt ggggaagtca tgcctgctgc 300
tgcagttcac ggataagcgc ttccagcccc tgacgatct caccatcggc gttgaatttg 360
gcgcccgcac gatcaccatc gacaacaagc ccatcaaact 400

<210> 3079
<211> 398
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-064-Q1-E1-F12
<400> 3079

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ccggcgccgc cgaggaggac gccgtggctg cgactgcgac tgcgcctgcg ccggcgctcg 120
cgtcggcgtc ctttgggctc ttctccgggg agttcctccg ccggcacggg ctgcacctcc 180
tgggcacgtc ctgcacgtgg ttcttctgtg acatcgcctt ctactcgcag aacctgttcc 240
agaaggacat cttcagcgcg gtgggggtgga tccccaggc ggcgacgatg aacgcgctgg 300
aggagctgtt cagcatcgcg cgggcgcagt cctgatcgc gctgtgcggc acggtgcccc 360

gctactggtt cacggtggcg ctgatcgacg tgttgggg 398

<210> 3080
<211> 403
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F4

<400> 3080

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gccatggacg tggactgcgt ctcgctgccc gacgccccgg cgggcgacgt ggatggcggc 120
gccgccccggc cgtggcccaa ggccgtcacc aacggcgggc tccacgagct gctggagtgc 180
cccggtgtgca ccaactccat gttcccgccg atccaccagt gcccgaatgg acacacgctg 240
tgttccacat gcaaggccag agtacacaac cgttgcccta cctgcaggca agagctgggc 300
gacatcaggt gcctggcgct ggagaaaagtc gccgagtcgc tggagctccc ctgcaggtac 360
tactcgctgg ggtgcccgga gatcatgccg tactacagca aga 403

<210> 3081
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F5

<400> 3081

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gtcagtattg gatttttagtt gccctgttga cagttttgga gagatttga gattttacaa 120
tatcatggct accgtttttac tcagaagcaa aggtgttggt ctttgtatat ttgtgggtacc 180
ctaagacaaa gggaactacg tatgtttatg gaactttctt taagccatat atttctcagc 240
atgagaatga aatcgaccga aatcttcttg agctcagagc tcgagccacc gatatggttg 300
tcctttactt ccataaggct gcttcggtag ggcaaaatac tttctttgac gttttaaaat 360
atgttgctgc ccagtccect tctcggaat c 391

<210> 3082
<211> 414
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F6

<400> 3082

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ggggggcggt cgcccggtt gcgtcgtcc gcgcccgcc cgcgcgcgtc cgcgcggcgc 120

tacggcccc gagccagtgg tccgtcggga gctggcggg cgcgccggcg cagcagcagc 180

ccgagtacc ggacaaggcg gacctggaag acgtgctgc gacgggtgga acgttcccc 240

ccatcgtctt cgccggcgag gcgcgcaccc tcgaggagcg cctcgcggag gccgcgcgtc 300

gccgggcctt cctcctccag ggcggcgact gcgccgagag cttcaaggag ttcaacgcca 360

acaacatcag ggacaccttc cgcgtcctcc tgcaaatgtc cgttgtgttc atgt 414

<210> 3083

<211> 362

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F7

<400> 3083

accacgcgt ccacgaggct caaatgccta gccctagtaa gggcgggcgt gactggccgc 60

tgctcagga catgatcgcc gataaccacc ggctcatcgt gttcacatcc aagaaaggga 120

agcaggggac ggaggggctc gcgtaccagt gggactacgt cgtggaaacc caatacggga 180

gcgagggcat ggcggatggc agttgcccac agcggaccga gtcgaagccc atggactcta 240

aggcccagtc actagtgtc ctgaatttct tcaccagcaa cccgagccaa agctgggcct 300

gcagcaacat ctccgcgcg ctcacagca tgcttaacgc ctgctaccac gcctccgcca 360

aa 362

<210> 3084

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-F8

<400> 3084

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 gggtcacagc tgccgtgctc ttctacatcc tcgccgttgc tgccctcagc gcggccgagg 120
 ccccggcaga gtcaccgaag gaaggcagtg ctgccaaaggc acctgagtct gccaaagagaa 180
 ctgctgcccc cgctgaagca ccgaagccg catccacccc cgtcgccgcc gctgccccat 240
 cgccgtcgtc taggaagtct ggtccagcta ccgcgccagc caccgcctct acacccccctt 300
 cttccacgga cgaggagttg agcccttccc cgccagcatc caccgccgcg gcgtcccctg 360
 cggctgaggg accggctgct gatgactccg ccggtgctgc tgcc 404

<210> 3085

<211> 428

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G1

<400> 3085

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 caagcgggag tacacgcagt acagcgagta caagaactgg gtgtggaagt cgcaggacga 120
 cctgttcttc aacggcgctt tcttcaacca gtccggcggc cagaacgagc gcaagtacga 180
 caggctcgac ctcatccagg ccaagggcgg ccagtacgcc gagtcgctca ccaggtagc 240
 cggcgcgctc aactgccgcg tcggcaggaa gtgctagtgc gtgtgcagct ctaggctgca 300
 gctttcatca ttggcgatcg atcgtaacaa tgcaaggttg tggtgtatat aactcttgtg 360
 tttggaatgc cgcccgtaat taatgggtcaa ctctaact gcttgccctt gcctgcgggc 420
 aaccaaca 428

<210> 3086

<211> 401

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-G2

<400> 3086

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 aaaaatgtcg cgcgtcacag ctgcggtgct cttctacatc ctgccggttg ctgccctcaa 120

cgcgggccgaa gccccggcag agtcaccgaa ggaaggcagt gctgccaaagg cacctgagtc 180
 tgccaagaga actgctgccc ccgctgaagc acccgaagcc gcatccaccc ccgtcgccgc 240
 cgctgccccca tcgccgtcgt ctaggaagtc tgggtccagct accgcgccag ccaccgcctc 300
 tacaccccct tcttcacgg acgaggagtt gagcccttcc ccgccagcat ccaccgccgc 360
 ggcgccccct gcggctgang gaccggctgc tgatgactcc g 401

<210> 3087

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G3

<400> 3087

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 ttagttaggc cagcttgtca ttgcatcgga gagatgtatc cggccactac gccctacgat 180
 acggcgctccg ggggtgggct ggccgcgggtg gccggcttgt tccccgtcgc cggagaggcc 240
 agggagtggg cgctcaggct cctggactgc ttcgacgact tcgacatctg ctgcatgacg 300
 ttttggtgcc cgtgcatcac gttcggggcg acggccgaga tcgtgggaca ccgcatgacg 360
 tcgtgcggga ctagcgcagc gctgttcgcg ctgatccagt gg 402

<210> 3088

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G5

<400> 3088

ccacgcgtcc acccacgcgt ccgcccacgc gtccgggtta agagcctcaa aggaggtaag 60
 gagatgagga tggatgttct tctgatggaa aatcttttgt ttgagcgca tgtgacaaca 120
 ttgtatgatt taaagggctc tgccagatca agatataacc cagactcaaa tggtagcgat 180
 aaagtacttc ttgatcagaa cttaattgaa gcgatgccta catcacctat atttgtcgga 240
 aacaaggcaa agaggctgct ggagagagct gtttggaatg acacgtcctt tcttgcttcc 300

atcgatgtaa tggattactc tttacttggt ggtgttgatg agaaaaggca tgaacttgta 360
atgggtatta tagatttcat aaggcaatat ac 392

<210> 3089
<211> 202
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-G7

<400> 3089

gtcgaccac gcatccagga gctcgtcgag gcgttggta gggaggcgta catgcgcgac 60
ccgtacgacg tcacgaagaa cttcaacgcc gctgtccata gatctgtcat catcaatccg 120
cgtgagaggt cggagaggcc ggggaatcac tttggagggg ggccaatgct tggctacgag 180
ccctagcaac atgtgttggc ga 202

<210> 3090
<211> 407
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-064-Q1-E1-H1

<400> 3090

cgggtcggcc acgcgtccga anaaacgana gatgactgtc gtgagcaaca agttgtcatt 60
aatgcaagtt caagttcttg tggccgttgg aacatcattt ctaataaggg gtgcctgntg 120
ttgtcctccc aaggtttccc cangaaagaa catcacaagc aactatggca gtgattggct 180
aaatgccaaag gcaacatggt atggcaagcc tacagggtgcc ggccccgacg acaatgggtg 240
cggatgtggg tacaaggacg tgaacaaggc ccctttcaac agcatgggag catgtggcaa 300
cgtccccatc ttcaaggatg gtctgggttg tggatcctgc ttcgagatca agtgcgacaa 360
gccagcggag tgctctggca agcccgtggt ggtatacatt acagaca 407

<210> 3091
<211> 373
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H3

<400> 3091

ggtcctagat atccggtcga cccacgcgtc cgagcgagat gagcatggac attgtcaggg 60
cgcgagctct ctgaagagga agacgcgcat ccgctcgcgc gatcgccatg catgccccgg 120
aacgcacaga gcagtgctag ctgtttgtct tgcattcatg accggcggcc tctgcatgta 180
cccggtgtgcc gttttttgca ccgcgcgtgc cagtgttctc ttactccatg taaactactc 240
tagacagtgc tcggtgagta cagctgctcg gtgagtacgg tgtcacagtc actccgtgta 300
ggcagtgccca tttcgaagac aatattgcac aatttaactg gaaaccttaa caaagggcgg 360
ccgctctaga gga 373

<210> 3092

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H5

<400> 3092

ccacgcgtcc gcccgtcctt cgccaccgcc atggccgacg tcggcgagcc tcctccctcg 60
ctctgccctt tatggggcca ccccgctgcc ttctccgttt caccgtcgac gtctgcggcg 120
gccagcgtgt cccccgaag gccgctgctg aagcgaagga cccaccga ggcgccacct 180
gcggtcgtga ggggtggagat cggggatgag gccgcggcgc tgcgcgaggc attggcgcg 240
cagcaagcgg cgctcgccga cgtccaggcg gagctcgacg cggagcgcg ggccgcggcc 300
ggcgccgccca gcgaggccat gaccatgate ctccgcttgc agcgcgagaa ggctgaggcc 360
atgatggagg cagccagtt ccgcgcgtac gccgaag 397

<210> 3093

<211> 389

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-064-Q1-E1-H6

<400> 3093

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cggcgccccg caagccgggg tcgtgcgga cagtgggtgc caacgcggag ctcaaggtgg 120
 tggacccgga caggggcctc tccctcgccc gcaacctccc cggcgagatc tgcattccggg 180
 gcccgcagat catgaaaggg tacctgaacg acccgagggc caccgcgagg acgatcgacg 240
 tccacggctg gctccacacc ggcgacatcg gctacgtcga cgacgacgac gaggtcttca 300
 tcgtcgaccg cgtcaaggag ctcatcaagt tcaagggtt ccangtgcg cggcccgagc 360
 tcgaggtccc ggctcttcgc caaccgctc 389

<210> 3094

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-064-Q1-E1-H7

<400> 3094

ccacgcgtcc acggacgcgt gggtttcgag taacacagtt gagcacgacg atgggatccc 60
 tcgctaataa catcatggtc gtgggcgcgc tcttgcggc gcttgcgtc ggcgggtcgt 120
 gggggcccc gaaggtgccg cccggcccca acatcaccac caactacaac ggcaagtggc 180
 tcaccgccag ggccacctgg tacggtcagc ccaacgggtc cggcgctcct gacaacggcg 240
 gtgcgtgcgg gatcaagaac gtgaacctgc caccctacag cggcatgacg gcgtgcggca 300
 acgtcccat cttcaaggac ggcaagggt gtggctcatg ctacgaggtg agatgcaagg 360
 aaaaacctga gtgctcgggc aatccagtca cgggtgtcat cacagacatg aactaacgag 420
 cctatcgctc cctaccactt cgac 444

<210> 3095

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-A10

<400> 3095

cgggtcgacc cagcgtccg cgatcgtcgg agcagagaga gacttcctcg cctccatccc 60
 atcccgcgc cgcgtctct acggtcgcta ataagccgcc gcatccaggg atggagatga 120
 agaagatcgc ctgcgccgc ctgcgcgcc cctcgccac cgtggcgctg gccgcggagg 180

cgccggctcc gtctcccacc agcggtctct cgcgggtcgc acccgccatc gtcggggccg 240
 ccgtggcctc cttcttcgcg tactacattc actgagccgc cggacgagga accgggagcg 300
 gaggggaaga gaccaaggtg gggggagaga cttggctgcg ctgcgctgct ctgctgctcc 360
 cgcgcattcc cgatgcgtgg gcgtgctctg attgggcacg gcggtggcag tggcacacct 420
 tcgtcttctt tttgtttgtt ttttt 445

<210> 3096
 <211> 413
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-A12

<400> 3096

ggtcagant atccgggtcg acccagcgt cgcactcaac ttccccgtt cctcgaccac 60
 ctcaacgagc ttctgctccg acgacgatga cgcgccgcca cagccacatg gcggacgacg 120
 ccgtcgccgc cggagcggcc gtttgetgcg caaggccggc ctgctgtct tctagcagga 180
 agcagcagca gcagcccgc gacgcgggt gcggcagcag cagcagcgac gaccactacc 240
 agcagcagct gatcatgctg aggcggacga ggagcgggcg ggcattcccg ccgccgatct 300
 ccgtgatcgg caagggcggg cggcgtggc tctgcctgcg ggcgcaccgc gaggggtggac 360
 gcctcgtgct gcggcagatg cccctgccgt cgcaggagct gctgcagccc tgc 413

<210> 3097
 <211> 223
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-A6

<400> 3097

ggaattcacg ggacgaccac ggcgccgcca cgcgtccgga tcgatgcacg gaggaggatg 60
 ctgccgtgct tctggcctaa tctactagtat aaagcaggcg gagacagcct ggccgcctga 120
 ccgcagtgtt ccccttctt ccccgctccc aaccacatgc cctgcctccg ccccgccccg 180
 cctgccccaa gctcgattcc ccagccccca acaaacaatt act 223

<210> 3098
 <211> 407
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-065-Q1-E1-B10

 <400> 3098

 cgggtcgacc cacgcgtccg cgaaaaacac aggtgagcgc gacgatggga tccctcgтта 60
 ataacatcat ggtcgtgggc gccgtccttg cggcgctcgt cgccggcggg tcgtgcgggc 120
 ccccgagggt gccacccggc cccaacatca ccaccaacta caacggcaag tggctcaccg 180
 ctagggccac ctggtacggt cagcccaacg gtgccggcgc tcctgacaac ggcggtgcgt 240
 gcgggatcaa gaacgtgaac ctgccaccct acagcggcat gacggcgtgc ggcaacatcc 300
 ccatcttcaa ggacggcaag ggctgcgggt catgctacga cgtgagatgc aacgataaac 360
 ctgagtgttc cggcaatcca gtcacggtgt acatcactga catgaac 407

<210> 3099
 <211> 411
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-065-Q1-E1-B11

 <400> 3099

 gggtcgagcc acgcgtccgc cggcggcctc gtggccatcg tcgtgtccgc gtcgttcaag 60
 gccaggttcc cagccccggc ctacgcgcgc gaccccgccg ggtccacgcc gccgcaggcc 120
 gacttcgtgt ggcggatcat cctgatgctg ggcgcgatgc ccgcggcgct cacctactac 180
 tggcgcacca agatgcccga gacggcgcgг tacacggcgc tggttgccaа gaacgccaag 240
 caggccgcgg ctgacatgtc caaggtgctg cagggtggaga tctcagccgg cgcgcgcgag 300
 gaggacgccg cggctgcgac tgcgactgag cctgcgccgg cgtcctttgg gctcttctcc 360
 ggggagttcc tccgccggca cgggctgcac ctctgggca cgtcctcgac g 411

<210> 3100
 <211> 410
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-B12

<400> 3100

cgggtcgggc cacgcgtccg cggaagcgtg gcgacgcgt gggttcacgc ctccctcacc 60
agataaggtc cgcctctttt ccgacattca caggggggac aggaaatcag cgcccatggc 120
ctcgattccg gcgacgacct tcgcggtcat cttatccgtc ctcttctgtg ccgcggctgg 180
caccgcggtc gacaacgacc tccccgacta cgtcatccag ggccgcgtct attgcgacac 240
ctgccgcgcc gggttcgtga ccaatgtcac cgagtacatc gcgggcgcca aggtgaggct 300
ggagtgcgaag cacttcggca ccggcaagct cgagcgctcc attgacgggg tgaccgacgg 360
gaacggcacg tacacgatcg agctcaagga cagccacgac gaggacatct 410

<210> 3101

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-C10

<400> 3101

cgggtcgggc cacgcgtccg gggttaacctct ctcaccatag cgcccgtctt gtgcgcccttc 60
gttcacctct ctttctctc gtccctgcct gccagggaga ggggaagtca gaggcacgga 120
gtggcgcaga gcagacgccc gtgaaccatt gtagctgtcc ctgtcgtcgt cgtcgtcaac 180
gaacccacac aaggaaagga tggagaagaa gccgaccatc ctcatgaaca ggtacgagct 240
cgggcgcacg ctcgggcagg gcaccttcgc caagggtgtac cacggccgga acctcgcgtc 300
cggcgagagc gtggccatca aggtcatcga caaggagaag gtgatgcgcg tcggcatgat 360
cgaccagatc aagcgcgaga tctccgtcat gcgcctcgtc cgccacccca acgtcgtgca 420
gctgcacgag gtgatggcca gcaagagcag gatatac 457

<210> 3102

<211> 283

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-C12

<400> 3102

gggtcggccc acgcgtccgc acgaagccgc ccggcgcggtg ctggaacgag aacgacccgc 60
 cgteccccgtc cccgcgcgag cccgcctcct cggccgcgga ggacgccacc gcactgtcga 120
 gcgcggcgac ccacgcgcgg cgccgcttcg gctcgggcac ccgctcctcc tctcctcct 180
 cggcccccgc gtcgaacccc gggatcgggg gcccgcgctt ctccggagaa gcagaagagc 240
 tcccgcgcgc cacggggcca ggaggcgctc ggggcagcgc gcg 283

<210> 3103
 <211> 351
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D10

<400> 3103

cgggtcgacc cacgcgtccg cgttcatcag cagtgcggcg atgaaggcag ccgtggccgc 60
 tctgctggtg ttgcgcgcgg tgtgcctgc cgcgcgcgcg gtggcgggcg aggcggaggc 120
 gaaggcgaag gctgtgggag gcgcgccgtc ggtgcccgct ggctcgctgg acatcgcgca 180
 gctgggcgcc aagggcgacg gcaagtcgga cagcaccocg atgggtgctca aggcgtggaa 240
 gcacgcgtgc gagggcgacg ggcagcagaa gatcgctcatc cccaagggca actacctgac 300
 gggcgcgctg gacctggtgg gccctgcaa gtctccatc atcatccgc t 351

<210> 3104
 <211> 393
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D11

<400> 3104

cgggtcgacc cacgcgtccg accaaacgtc cgcgcgcgctt gatgtgtgga tccgtcgcg 60
 ctgccgtcaa gcatagacac caagaaccag acctcggggt ggatcatcgg ggtcgcgag 120
 gtctactgga tgggggtcaag aagtatccgg gcaagtcgtc tctgggaacc ctgcttattg 180
 ctgcgccgat gctagcgccg ccgtggactg cgcggctccg agaagtcgag gtcgtcgca 240
 catatcccag gaaccttcgg acttggaaac aagctgtcca taatatggaa agcatgattg 300
 ggacgaaggc cgaatcaatt ctgaagctat gcgcaaggaa gcttcggctc agtagcagaa 360

aaaggaaccg acctaaaaag gaaaaggcta ttt 393

<210> 3105

<211> 282

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-D6

<400> 3105

ccacgcgtcg gcccgctcgc tctcacattc atttgtgcag ctgattacgc taggtctatt 60

tacgcagctg tcgtgtgtcg aattttaaca ggcacggcca tgcacagac gccacacca 120

cacatcattt tctttcttcc tttcttttga ttcgacgacg cctgtgagtc atgcagctc 180

tcgatcgagg caaagctgtt gtatgttggt agcgtgtact gtttttttat tatttataaa 240

gttttgatgg gaaggaaaaa gaaggcggc cgctctagag ga 282

<210> 3106

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E12

<400> 3106

gggtcgaccc acgcgtccgg atcacctctc cctctccctc tccgatccat tctccagcgc 60

agcgaagtaa acatgtctga ccgggcaaag atgtcgtggc aggcgtacgt ggacgagcac 120

ctgatgtgcg agatcgaggg ccaccacctc gggcgggcgg ccacgctcgg ccacgacggt 180

gccgcctggg cgcagagcac ggcgttcccc gagttcaaga ccgaggaaat ggccaacatc 240

cataaggact tccacgaacc aagggaactc ggcgcgacag gcctgttcct cggacctacc 300

aagtacatgg tcatccaagg cgaacctggt gccgtcatcc gtggcaagaa gggatcagga 360

ggc 363

<210> 3107

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-E9

<400> 3107

cggggtcgacc cacgcgtccg acgaacagac acatagagag actggacctc ccgtcacaat 60

caaagagggga agaacctcct atacagcgac caccatcgat tgctcgctccc agctcatcag 120

cagcgacatt tctgtacctc actcacgcga cagacacgct agtcctggcc cacgtactgt 180

gctcagttcc aatgtcgctc cctcgaggca gaccatcggt atcagtgact cacctctata 240

aagtcactgt catcaccttc atggacacct agatcgacgt caagcccgca tgtctgatcg 300

ttcagggact gtttggtgac atcattccaa atatcgacag aaacttccga gcactttgca 360

caggggagaa aggaattgcc aagtcgggca agcctctgtg gtacaagggg tcgacgttcc 420

acaggattat cccgggggttc 440

<210> 3108

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-F10

<400> 3108

cggggtcgagc cacgcgtccg accaagcgtc cgcccacgcy tccgcccacg cgtccgcccc 60

cgcggtccgat ccgatccatc ttggggcgggc gccgcgcgctc gagggccagc caaagcttgc 120

catggcagcc gtccgggtccg acaggggtcca ccaccaccac cgccgctccg aggcgtcgtg 180

cccggcaacc tccgcgggccg tggcgggcggc gagggccgat gacgccctgc gccagcgccc 240

gcggggggctc gtgcaggtcc gggagcgggga tcagggcccc ctgtcgacgg ggcaccagca 300

cctgcaccac catcaccacc agctgcggcg gtcggcgggcg ttcccacccc gccgcccggg 360

gccgggggcgc cgccctcctc agcgttgcca aagcgacctc aacatcaagg gagcacgctc 420

ct 422

<210> 3109

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-F11

<400> 3109

cggggtccagc cacgcgtccg aactcacccc gccttcacgc ctccctcacc aaataaggtc 60
 ccgccctttt ccgacattca cagggggggac aggaaatcag cggccatggc ctogattccg 120
 gcgacgacct tcgccgtcat cttatccgtc ctcttctgtg ccgcggctgg caccgcccgtc 180
 gacaacgacc tccccgacta cgatcatccag ggccgcgtct attgcgacac ctgccgcgcc 240
 ggggttcgtga ccaatgtcac cgagtacatc gcgggcgcca aggtgaggct ggagtgcgaag 300
 cacttcggca ccggcaagct cgagcgctcc atcgacgggg tgaccgacgg gaacggcacg 360
 tacacgatcg agctcaagga cagccacgag gaggacatct gcgagggtgt cttggtggag 420
 agcccgcgca aggactgcga cca 443

<210> 3110
 <211> 421
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-065-Q1-E1-F12
 <400> 3110

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 gcgcccgggg acagccccaac cacggatggc atccacatgg gcgactcatc cgggatcacg 120
 atcaccaaca ccgtcattgg cgtcgggtgac gactgcatct ccatcgggcc cgggacctcc 180
 aaggtgaaca tcaccggcgt gacctgcggc cctggccacg gcacagcat cggcagccta 240
 gggcggtaca aggacgagaa ggacgtcacg gacatcaacg tcaaggattg cactcttaag 300
 aagacgatgt tcggcgtccg catcaaggcg tacgaggacg ccgcctccgt gtcaccgctc 360
 tccaagatcc actacgagaa tatcaagatg gaggactcag ccaaccccat cttcatcgac 420
 a 421

<210> 3111
 <211> 451
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-065-Q1-E1-F9
 <400> 3111

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attgcaggtc gtagttgagc agcagcaacc actgcacagg atgtcgtggc agacgtacgt 120
cgatgagcac ctcatgtgcg agatcgaggg ccaccacctg agctctgccg ccatagtcgg 180
ccacgacggc gccgtttggg cccagagcac cgcattccca cagttcaagc cagaggagat 240
gaccaacatc attaaggact tcgacgagcc tgggtttctg gccccgatcg gcctcttctt 300
tggccccacc aagtacatgg tcatccaagg cgagcccgcc gctgtcatcc gcgggaagaa 360
gggatctgga ngcataactg tgaagaagac cggacaggcg ctggtgatcg gcatctacga 420
cgagcccatg acccctggac agtgcaacat g 451

<210> 3112
<211> 394
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-065-Q1-E1-G11
<400> 3112

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agcatccttt cgaagaagta acacttctcc gtgaggcctg agccccctgc cgcggtgagc 120
caagccggcg cacgtcgccc cggggctcac gctcaccacc gagccccaac caattaataa 180
tatatatata tagctaggat cgatcgtcag taaaatggca ggctccgccg tcttgaggag 240
ccccctgtcc gtcctcctct acatcctcgc cgccgtgcc gccaccgcc cggcgacgcc 300
gaccgacgcc gccatcgacg aggcgtacgc gcatctcgtc aacctcaccg ctaaccagga 360
gtactggggc gagcgcgcg aggcggcgca cgcg 394

<210> 3113
<211> 298
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-G12
<400> 3113

ccgggtcgac ccacgcgtcc gaccacgcgt ccgccacgc gtccggccta gcggaaggtc 60
ggcggcggcc cgctcgtctg atcgcgatgg agcggcgagg cagcagcgcc gcggggagct 120

gcctggggct gctggcggtc cccttggtgt caacgagcgt catcctcgtc tctaccgcc 180
tcaacggccg cctgnaggcg gacctcaggg tcataatacc cggcaaaggc aacggacccc 240
cggacaaggg cgggcgccgc acaaggaaga ccagaaaggt gcccttcccg gccaaactt 298

<210> 3114
<211> 437
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-065-Q1-E1-H11

<400> 3114

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gcgtgcagcc acaggcaggc gtcggcacca tgtcttcttt caccggcacg caggacaagt 120
gcgcggagtg cgacaagacc gtccacttca tcgacctcct caccggccgac ggcgtcacct 180
accataagac atgcttcaag tgcagccact gcaaagggat cctctcgatg tgcagctact 240
cttccatgga cgggtgtgctg tactgcaaga cccacttcga gcagctcttc aaggagaccg 300
ggagcttctc caagaacttc acgccagggtg gcaagtcttc agacaagggt gaactgacaa 360
gggccccage aagctatcat ctgcgttttc tgggtactcag gataagtgtg cagcttgcca 420
gaaaacagtg taccgcg 437

<210> 3115
<211> 356
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-065-Q1-E1-H7

<400> 3115

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gagaaaatga attaaattcc cttgaaaaaa taaaacctct tagaaaaaat aaggttgtga 120
aactagccct attaataaat ttatgcacga atgcaacatc ggtttcagca tgttcctctt 180
tacagaatac tactgcttcc gtgtatacag agaaactaca tttcacggag tagtaaataa 240
acagggatta attagcgccg tgtgcatgca tgcatacngc gttgggctgg ccgacatgat 300
cataacaatt aattaattaa ttaaggcgaa gacagcaagc gtggaggatc gatgcg 356

<210> 3116
 <211> 410
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q1-E1-A1

 <400> 3116

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 caagagaaac cgcggcgcg gcgagaggag gaagggcaga cgcagacgca gacgggcaaa 120
 caagatgagg gagatcatca gcatccacat cggccaggcc gggatccagg tcggcaacgc 180
 ctgctgggag ctctactgcc tcgagcacgg catcgagcac gatggcacca tgcccagtga 240
 ttctcgggtt ggcgtcgca atgatgcctt caacacgttc ttcagcgaga ctggttccgg 300
 caagcatgtg ccaggggcca tcttcgtcga ccttgagccc actgtcatcg acgaggttcg 360
 cactggctcg taccgccagc tcttccacc agagcagctc atctcgggga 410

<210> 3117
 <211> 339
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q1-E1-A5

 <400> 3117

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 agccgtaacc agcgtggga gcgtcggacg atggtagctc tacaacattc atcaccgaca 120
 gacgggtctat gtggagctgg gtctcacggg caggatttct gtcgtccgc aaactcgtac 180
 tttcatcata atcacccttg ttgtcgaatc ttcagacatc agttacactg tcactgtcaa 240
 gattcaagaa taagaggga tccctccata acactagcgg ctcaactttg ccggtaatca 300
 tctctacgac ggaccacac tgagctacta gaacattca 339

<210> 3118
 <211> 417
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q1-E1-A7

<400> 3118

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tccttggcgg ccgagcgggg ctccctctga cgactccgcg ctccctctgg tgcacggccg 120

cttctattgc cgtcgcctgg ggcttctgct gcgttaccat gggccaaaca acgaggaaaa 180

tgccgagaga gagaggtaga gacagtttgg tcgtcgagtc acatggaggg tgccctggtg 240

gccggggaat ccttcacctg cgggggtgcta catcgccggg ctgctgcata gtggtctgcc 300

tctactacca gggctgactc cattgccgga cagccaaaac tctcggtcga gtctctgaag 360

gccgtctgtc cctgttcctt ccgatttcca agcgccgcgg ggctgtgctg ctaccgt 417

<210> 3119

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-B12

<400> 3119

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ggcaggatcc agtgcaaggg caagtgcacc gagcagaagg gcatcacggc gccggccatg 120

aaggtctgcc aggaggagtg cgacaaggcg tacgtggtga aggcggccga ggtcaccaag 180

gcctgcagcg tcacctgcgc caaggagaag aaccgcgcgc tcagcgagaa ctgcaagagg 240

tcctgcaccc ctctctcttc ttgaagcgaa gcccttgaa atgaatgaac catgcatgca 300

tgcatgcatg tatgcatgcc cccgggggtga cgtggcggtc agtcaggcg ctgagcgagt 360

ctatacgtag gtcgtcaacg gctgggcacg catgccataa ccatctgata tggacggaac 420

tata 424

<210> 3120

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-E1

<400> 3120

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acggtggaga tggccggtgg cgcgaggcta gagccggaag ccaagagcgt ggtgatgccg 120
gaggtagtgc ccggggtggc gtgcctggcc tttaggaagc tgccgcgggg agggcccggg 180
atcttgggca acgtgctcat gcaggagtac atctgggaga tcgaccacgg aaaggggaag 240
atgaggttca ggaaggacaa gtgcaacacc catcatctcc acaacagcaa aggcggagag 300
gtctataata ataataatgg caattcctcc tctactgtcg tgcacgcgt caattaattc 360
gttctctcct ctctacctct acaaaattaa aggaccagac catgcatgca c 411

<210> 3121
<211> 357
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-066-Q1-E1-E5
<400> 3121

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ttctccctcc tccacctttc tccttttctt gccacggcaa aacaccttcg ccggcgagag 120
catggcgatg gcgtagcgtg tcctggaggt caccctggtg tcggcaaatg acctcaagaa 180
agtgtcgctc ttctcccgga ctgcgcatcta cgcctgggtc tccatctccg gattcgacct 240
ccgcatecct tcccacagca cccaagcaga ccacagcaac ggctgcaacc cctgctggaa 300
cgccgtggta cacttcccca tcccggctgc cgctgacacg cgcggcctcg cactcca 357

<210> 3122
<211> 319
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-066-Q1-E1-G4
<400> 3122

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cgcaaggcca cctcatggca cgttctcccc gctgactgga agttcggcgt cacgtaccag 120
gcatccaaga acttctaagt agccactttc cctcctcttc ttcacctctg atatgcccac 180
aagcaaccat gcaaataata acatgcatca tgcacgcata ttcattcttt cgctcatgca 240

ctccaatatg gtgccggagt taaaaaaatg taaatcaatg tgcaaactca aatgacatct 300
taaccagttg tgatcanaa 319

<210> 3123
<211> 303
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-G8

<400> 3123

ccacgcgtcc gccacgcgt ccgccacgc gtccgccatg accttaagtc acggtttggt 60
atcatacctc aggaacctgt tctccttgaa gggaccatta ggagcaacat tgatccgctt 120
gagcagtatt ccgatgatga aatctggcag gcattgggcc gctgtcagtt gaaagaagcc 180
gtagcttcaa aaccgaaaa gcttgatgct tcagtcgtcg acaatggtga aaactggagt 240
gttggacaac gtcaactgct atgcctgggg cggtgatgc taaagcaca caaaatactg 300
ttc 303

<210> 3124
<211> 286
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H11

<400> 3124

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agccagagaa actaataaaa ctctcgccgc cgccatccga gcgaacaagc caaccgacct 120
cgtccccaag gcaatccgcc gccgacgtac caccaccacc gcaggagcga gatggagatg 180
aagaggatcc tcttcgccgt cctcgtcgtc atcgccgcct cggccaccgc agtgetggcc 240
tccaccgagg ccgcccgcgc gggcgcccca actgcctcgc agtcgt 286

<210> 3125
<211> 284
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H2

<400> 3125

ccacgcgtcc gcatttctcc tagaaggtcg agaggagaag aaggcgagac gtgcagtccg 60

tcggggtccg atcgagaaca gggaagcaag aggctgctag agatcgagct catcaaccaa 120

tcaagtcgta cgtcgtcagc atcacgcgac cggatggcgc gcgccgcgtc cagctatgta 180

tccaagaggg ggctctccgc aaccattaag gtggccgagg aatcccttaa caaaggggag 240

gacaaggcgg ttaaactggg aactgtggcc aaggacatcg ccag 284

<210> 3126

<211> 356

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H6

<400> 3126

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cctggtgctg tacggcagga tccagtgcaa gggcaagtgc accgagcaga agggcatcac 120

ggcgccggcc atgaaggtct gccaggagga gtgcgacaag gcgtacgtgg tgaaggcggc 180

cgaggtcacc aaggcctgca gcgtcacctg cgccaaggag aagaacccgc gcctcagcga 240

gaactgcaag aggtcctgca cccctcctcc ttcttgaagc gaagcccctt gaaatgaatg 300

aaccatgcat gcatgcatgc atgtatgcat gcgccggggg gacgtggcgt tcagct 356

<210> 3127

<211> 224

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q1-E1-H8

<400> 3127

ccacgcgtcc ggttaaaaat gacggttcac tcacatagc ttggcatgta aatgcaagtg 60

atggcaatgg gaatcctact ggtatcagtt acaacaagag tgctcctgaa catccaaagc 120

tggatgcctc acacatcggg aacgcagcac cgtcaagct ccagtttggg ccttttggga 180

tcaatggctg gatgaatgac acggatggta ccagccatac tggg 224

<210> 3128

<211> 366
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-A10

 <400> 3128

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 tagttatgga cggattggta ggcctcttga aagtctcgct ggtccgggggt atcaaccttg 120
 cctaccgcga cgcaagaggc agcgatccgt atgtcgtcct acggcttggc aagaagaaac 180
 tgaagacaag cgtgaagaag agatccgtga accccatatg gcaagaggag ctaactctga 240
 ccgtcacaga tcccagccaa ccactgaagc tggaggtggt cgacaaggac accttcagca 300
 gagacgaccc catgggagac gcggaggtgg acgtggcgcc actgatggag gcggtgagca 360
 tgaacc 366

<210> 3129
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-A4

 <400> 3129

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 ccttgggttt gttgcacaac tcaatgaagg gcgccatctt aagaagcgcc ctactgagtt 120
 tcgtgtggac cgtgtgctcc agccgtttga ccctgccaaa ttcaatttca caaaagttgg 180
 ccaggaagag gttctcttcc aatttgagaa tagtggtggt gatgacagct atttcctgaa 240
 caacgctcca atcattgctg ttgatcgggc tccaaatgtt attgctatca atgtaagccc 300
 aattgaatat ggacatgtgc ttctcattcc tcgtgttctg gaccgcctgc ctcagaggat 360
 tgattcagag agcttcttgc ttgcactgca aatggcagcc gagggaggta gcccatat 418

<210> 3130
 <211> 446
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-A5

<400> 3130

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ccggcctctg ccagccccgg gctgcctgcg agggcttctg atggccctcg acgccgtcct 180

ttcctcctag tgcccagctt tattgcagat ccagccctct gatcctcgtc ttctttcacc 240

tctccaacat gaaggtaaac accaagatca agctggagcc ggtcatggcg ccgtcgtcgt 300

ccctgccgcg gaggccagc gagctaccgc acccgccgtc accgttcagc tccaacacgg 360

cgcaccaccc cgtctccgtg ccaccacac ctaggttgtc cttatcgtgc tcgtcgttcg 420

gccacatggt gaccccgccc accgac 446

<210> 3131

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A7

<400> 3131

gggtccaccc acgcgatccg aggacgcgtg ggcggacgcg tgggcggcac ccggtatccc 60

tgctcctctt ccttggcggc cgagcggggc tccctctgac gactccgcgc ttctcttggt 120

gcacggccgc ttctattgcc gtcgcctggg gcttctgctg cgttaccatg ggccaaacaa 180

cgaggaaaat gccgagagag agaggtagag acagtttggt cgtcgagtca catggagggt 240

gccctggtgg ccggggaatc cttcacctgc ggggtgctac atcgccgggc tgctgcatcg 300

tggtctgcct ctactaccag ggctgactcc attgccggac agccaaaact ctcggtcgag 360

tctctgaagg ccgtctgtcc ctgttccttc cgattccaag gcgccgccgg gctgtgctgc 420

taccgtctgt tgttgagggt ggtgatgac cggtca 456

<210> 3132

<211> 473

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A8

<400> 3132

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 cgctttcttc gtcccacgct ccgtctttat ttgtaatctg aagcttacag gaacatttga 120
 gtggatcatg gacggattgg taggcctctt gaaagtcgg gtggtgaggg gcatcaacct 180
 tgcctaccgc gacgcaagag gcagcgatcc gtatgtcgtc ctacgacttg gcaagaagaa 240
 acttaagacg agcgtgaaga agagatctgt gaaccccatc tggcacgagg agctaactct 300
 gaccgtcaca gatcccagcc tagctctgaa gctggagggtg ttcgacaagg acacgttcag 360
 cagggacgac ccgatggggg acgcggagat cgacgtggcg ccgctgggtg aggcggcgaa 420
 cgcgagcccc gaggcgagcc tgaggaacgg cgccatcatc ctgtcgggtg ggc 473

<210> 3133
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-A9

<400> 3133

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 agatcgagaa cgtcgagaac ctgtccatca acggccacgg caccatcgac gggcagggag 120
 ccctgggtgtg gagcaagaac cagtgccagc attcttaciaa ttgcaagatc ctcccgaata 180
 gcttgggtgct ggattttgtg acgaacgtcc agatccgagg catcacgtg ctcaacagca 240
 agttcttcca cctcaacatc ttcgagtgcg agaacgtgct gatcgacaaa gtgacgggtca 300
 aggccccggg cgacagcccc aacacggagc gcatccacat cggcgactcc agcaacgtga 360
 ccatcagcag caccaccatc g 381

<210> 3134
 <211> 416
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B10

<400> 3134

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 cggttatggc aggatgtggc tgacctccca tttccctctt ctctctctcc ctacctgtg 120

ggatgtggcc ttgctcccaa tctctgcatg ggaagtcacg ccggaggagt gtgatggtgt 180
cacattccgt ttggcccgca agcgtgcatg aggggtggcag tggtagcacg agagggaag 240
aagaaagaga ttacctaaca tttggatctc actgccacat ctggtgtcac atccatattg 300
tcccgaagc gtgcatgagg gcggcagcgg tggcacgaga gggaaagaag aaactaccta 360
acattttttg cctcactggc acggcatcaa aagcatttag gaatagtcaa gggggt 416

<210> 3135
<211> 249
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B11

<400> 3135

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taggtgcaag agatttgctt gtcaaccatc acaattcgcc tcgcggtcat ataggatgac 120
agggcatagt atgcacaca ctgtgagcag acttgctgac agaactgtaa cattcggttc 180
attgaatgaa gtttgctgac aagatgggta ccaagagcat cgatgttgtc catcggtttt 240
tggacgccg 249

<210> 3136
<211> 76
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B2

<400> 3136

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cggccgctct agagga 76

<210> 3137
<211> 453
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-B4

<400> 3137

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 atgggatccc tcgctaataa catcatggtc gtgggcgcgcg tccttgcggc gcttgtcgtc 120
 ggcgggtcgt gcgggccccc gaaggtgccg cccggcccca acatcaccac caactacaac 180
 ggcaagtggc tcaccgccag ggccacctgg tacggtcagc ccaacgggtgc cggcgctcct 240
 gacaacggcg gtgcgtgcgg gatcaagaac gtgaacctgc caccctacag cggcatgacg 300
 gcgtgcggca acgtcccat cttcaaggac ggcaagggtc gtggctcatg ctacgaggtg 360
 agatgcaagg aaaaacctga gtgctcgggc aatccagtca cgggtgtcat cacagacatg 420
 aactacgagc ctatcgctcc ctaccacttc gac 453

<210> 3138
 <211> 372
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-066-Q2-E1-B5
 <400> 3138

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 ccacacgata tttcgtcggg acctggctgg ccgctagctc aggaacgata tcatgaaaat 180
 tctgactgaa tgcggctaata cttcagcag tacatgcttg agcagtaaaa tgtcacggac 240
 atgaaggaca acctcgccat agattgcaact ggagctagac tagaaaattg agactgccaa 300
 gactagctct tcttggtgat aagagctacg aactgcatg actcgacagg tcatcactat 360
 ttgtgctgaa cg 372

<210> 3139
 <211> 387
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-066-Q2-E1-C12
 <400> 3139

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 ccaaataagg tcccgcctt ttccgacatt cacagggggg acaggaaatc agcggccatg 120

gcctcgattc cggcgacgac cttcgccgtc atcttatccg tcctcttctg tgccgcggct 180
ggcaccgccg tcgacaacga cctccccgac tacgtcatcc agggccgcgt ctattgcgac 240
acctgccgcy cggggttcgt gaccaatgtc accgagtaca tcgcggggcg caaggtgagg 300
ctggagtgcg agcacttcgg caccggcaag ctcgagcgct ccacgcgacg ggtgaccgac 360
gggaacggca cgtacacgat cgagctc 387

<210> 3140
<211> 423
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C3

<400> 3140

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cgctcatcg accacgcccc cttccaggct cccgtctcca tgggtctcct ctcaaacagg 120
attgggaggg agagcctcaa ggcgggggat catatctact cctggagggc ggcgtgggtc 180
tacgcgcac acggaatata tgtgggcat gataaggtga tccatttcac aagaggaaga 240
ggacaggagg tcggaacagg aactgtcgtc gatattattc ttgtgagttc cccccaaaa 300
cgaagcaaca cgccttgccc ggtgtgcacc gacgaaacca ggcacagcag cacagagacg 360
aacggcgtag tatctcctg cctcagctgc ttcctagctg ggggtgctct ctaccgtttc 420
gag 423

<210> 3141
<211> 399
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-A9

<400> 3141

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acgggctagc tagctccctc cctcccagcc atggcgacgc cggacaacaa ggggcacggg 120
catccgtgc ccaagtttgg ggagtgggac gtgaagaatc cggccacgtc cgagggttc 180
accgtcatat tccagaaggc ccgcgacgac aagaagacca ccaccggccc tggggctggg 240

aacgcgcgcg caggcattcc gccggccttc aggaacggcg gcggcgacgg cgggtacagg 300
 cccgacttcg gcgacggcaa ccagtacacg ccgccccaaac ggaagaagtg ggccttctgt 360
 ggctgctgaa tcgaagctcg ctgtgctgct gtgctgact 399

<210> 3142
 <211> 393
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-051-Q1-E1-B1

<400> 3142

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 agaaaaatac cagcttacca acaacagcag cagcaagccc acccgttcga cgacatggcc 120
 cgcctcggcg cggcgccgt gttggcgctc ctagtggcgg tcgcggcggt ggccgcgttc 180
 ctgcgggtgc cggcctcggc gaagtccggg gagctgagcg cgatgggggt gctggcggcg 240
 aaaggcgcca gcggcgcgcc cccgcagagt tgctcggcg cggtgggcca gtgcgacgtg 300
 gacgaggcgg aggaactcgg gctgagcgcc ggcgccctcg gctccgacga cgcggtgcgg 360
 cggacgctgg cgcagcgga accgaccaac cgg 393

<210> 3143
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B10

<400> 3143

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 gttcctcgcc gtggcctcac cggcggttct ggccgccttc gatgtgatat agatgctggc 120
 cgacaagccc acgtactcca cgttcttgaa gctcctgcag gacaccaagg tcgcgggcca 180
 ggccaatcag ctgaggtcgg cgacgtact ggtcgtcccc gacaaacttg ccaagcctct 240
 ggcgtctctg cccgccgatt atgtgcggtc ggcagtggag aaccacgtcc ttctcagtta 300
 cttcgacccc atcaagctgg acgagatgaa catacgcacc gtcacctccc ccacgtgct 360
 ctccgtcacc gacaagaaac tcggcgctct caactaca 398

<210> 3144
 <211> 441
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B11

<400> 3144

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 gcacagacaa tgcgatgaga gccttggtcc tcttggtcct cttctgcac gtgcatgggtg 120
 agaaggaaga gtcaaagggc atcgatgcga aagcgccgg gcctgggtggg tccttcgaca 180
 tcaccaagtt gggcgccctcc ggcaatggca agacagacag cacgaaggct gtgcaggagg 240
 catgggcacg ggcgtgcggc ggcactggga agcagacaat cctcatatcc aagggcgact 300
 tccttgctgg acaactcaac ttcacaggcc cttgcaagg cgacgtgacc atccagggtg 360
 atggcaatct gctggcgacc acggacctaa gccagtacaa ggaacatggt aattggatcg 420
 agattctacg cgtggataac c 441

<210> 3145
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B12

<400> 3145

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 cgccgccgcc gccgctcgtc tccctgagag gtgccgggac cgaggaactg gccgagtact 120
 aggtagagaa tcggtttttc ttgtctcagc ccgggggtctg ctgcgtcttg tgggtggtgaa 180
 ggggagaaat tcgtgagatc tgttcgggat caggcgtgcg agctcgggaa tcaggggttt 240
 cacacatagc ttcgtcgatt tgaatttgat gtactaatgg agtctaaggg tggcaaaaag 300
 tctagcagta gtcgttctat gatgtatgaa gctccccttg gctacagcat tgaggacgtt 360
 cgacctgccg gaggcgtgaa gaagttcagt ctgctgctta ctccaactgc g 411

<210> 3146
 <211> 464

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-051-Q1-E1-B2

 <400> 3146

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 atcatggggc aagcctcacg gctcgtcctc ctcccgctcg tggcgctgct gtccgcccgc 120
 ctctccccgc aggcgctggg taagggtagg ggaggcaggg gacacgggtg cgccgtcaac 180
 ccgcaggctg ccggcatctg ctctcgcacc ccgttcccgg aggtgtgcac gtccaccgcc 240
 gggcggcacg cgtccaagta cccggtcac gacaacctgg ccgtgctgaa catgcagggtg 300
 gacgcgttcg ccaagcgcac cgcgaggcg cgcaagcacg tcgcgaggtc ggcccgcacc 360
 atccccccgc agcagacgca ggcgctcacg ttctgcgaca ccatgtacat gaacacgcaa 420
 gacaccatcg gggccgcgca gccgggcac acgttcaagg acac 464

<210> 3147
 <211> 348
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-051-Q1-E1-B4

 <400> 3147

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 tccgggggttc ggtttcgtgg gtgggcggat cgagatggcg gcgtcggatg ttgagtaccg 120
 ctgcttcgtc ggcggcctcg cctgggccac ggacgaccac tccctccaca acgccttcag 180
 cacctacggc gaggtcctcg agtccaagat catcctcgat cgggagacgc agagggtccc 240
 cggcttcggc ttcgtcacct tctccacgga ggaggcgatg cggaacgcca tcgagggcat 300
 gaacggcaag gagctggacg gccgcaacat caccgtcaac gagggcca 348

<210> 3148
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-051-Q1-E1-B5

 <400> 3148

attccccgggc caaccacgc gtcagcaatc atgtctggtc gttcgtggac aataatggcg 60
cctctccaag cgtcaaggcg gtcctccggc tcgccgcggg ctccgaggag gaggaggacg 120
gcggcggcaa aaagaagccc cacgtcaacc acggcaagtt taaggcggag ccgtggacgg 180
acgggcacgc gacgtactac ggggggcgcg acgggttaac tgacaccacg gacagcggcg 240
cgtgcggcta caagggcgag ctggggaaag actacggcac cctgacggcg gccgtgggcc 300
cgtcgtgta caccaacggc accgggtgcg gcgcgtgcta cgagctcaag ggccccaagg 360
gcaccgtggt ggtgacggcc accaacgagg ccccgccggc cggttaaccg gcagaaaggg 420
c 421

<210> 3149
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B6

<400> 3149

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tcgtgcagcc tgcacgggtc gacgagggct gcacgaacga tgggggtccgc ctccgcctca 120
gtgacgacaa ccagcctgct ggcgctggcg ctggcagcgc tggctttcgt ctccagggcc 180
gcggcgcagg gcaacggctg ttccagcgtg atgatgaccc tggccccgtg catggacttc 240
atctccagca aggcgtcggg gccggggatc tcttgcgtgct cgggtgctggc cggagtcgtg 300
cagaccgacc cccgctgcct ctgcatggta ctggacggca ctgccacgtc ctccggcatc 360
gccatcaacc agaccagggc gctggagctc ccggcgtctg c 401

<210> 3150
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B7

<400> 3150

ccacgcgtcc ggtacatga cgtgacctc ccgccgccgt cgcaggcacg gttcggcttc 60
gagatcaagg agtgggcat gaccagccgc tacgcgtccg ctgaggatct gcaccagatg 120

gacagcgacc aggaagaggg tgctgagggg ggcgatgacg gtgacagcag ttgccacac 180
gccatcgaca tgcaggcgga ggagttcatc accaagttct atgagcagtt caagtcagaa 240
tcgttcaacg gccgtgcctc cgagtgatcc attgatccat ccgcttgccg catgtatgta 300
atcgttctga tcttaaccga aattgcattc gtgtcagaga cgactctacc caatatggat 360
caggaagaaa tgtatcagtg atcgcatcga taaacacagt ttgtctgaac tct 413

<210> 3151
<211> 423
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-051-Q1-E1-B8

<400> 3151

ccacgcgtcc gattctcggt tggagaggcc gacattgaca gcacagtga aacagcaaag 60
aagaaagggg ccagcaactt gtctactgat ctgaacggca agaccatgcc caagaaggat 120
tcagcgtctg cagagaaaca gcctccgaac cgtgagaggc cgaaaggaat gagggtcagc 180
agcaattttg cagacgggaa ggctcaacc tcaacaaccg gagatcatga aggcgcgtcg 240
acccggcagc ctctggcgg cgacagcagc attttgctgg gctagcgtgc atatgaatct 300
tgccctatgc cgcgcgcgca cgggtggttg gtccgtcagt ctgtggtctt gttttcgtgg 360
tcaggccatg tgtcncatct ccggtccttc agatgatctg gttcgcattc gtcttggtga 420
tgg 423

<210> 3152
<211> 299
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-B9

<400> 3152

ccacgcgtcc gaggcctccc agggagccat caatatccca ccataggtta agttaccag 60
atgtcacagg aaggacagct ggcttcgaa ctcaatacac acagggtgtc tatgatccca 120
ggctccggac gtgcatatg cacaacgaga aggacaagag ccaacaagga ccatactcat 180

gtagctaccc tgtggcgctg ctggaagcag cggccgcacg ttcgagatca cgaatctctg 240
cgcgaccatc caacgtaata ccgcctccac aaaggcactc caatacactt caacgtcag 299

<210> 3153
<211> 424
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C1

<400> 3153

gggacgaccc acgcgtccga gccgagttcc gcaccttcat cgagatcgtc ttcgagaacc 60
ccgagaagag catagactcc ctccacgtcg atggctacgc cttcttcggc gtcgggatgg 120
gccccgggaa gtggtcgccg gaggtgagga agacgtacaa cctgctggac acggtgagcc 180
ggcacacgat ccaggtgtac ccgcggtcat ggacggcaat catgctgacg ttcgacaacg 240
cgggcatgtg gagcgtgcat tccaacatct gggagcggta ctacctcggg gagcagttct 300
acatcagcgt cgtctcgccg gcgcgatcac tgccgcgacga gtacaacatg cccgacaacg 360
ccctccgctg cggcaatgtc gtggggctgc cgctgccgcc gtcctacgcc ccgcgcgcta 420
agac 424

<210> 3154
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C10

<400> 3154

ccacgcgtcc gacagccagc tgtaccggtt cgagggcctc cagaactaca cctccggcat 60
catccaccac gtccgcctcc agggcctgga gcctgggacc aggtacttgt accggtgcgg 120
cgacccggcc atcccgacg ccatgagcgg cgtgcacgcg ttccgcacga tgccggccgt 180
cgggcccggg agctaccggg ggcggatcgc cgtggtcggg gacctcgggc tcacctacaa 240
caccacctcg acggtggacc acttggtgcg caaccgcccc gacctggtgc tectctcgg 300
cgacgtctgc tacgccaacc tgtacctgac caacggcacc ggggcggact gctactctg 360
cgcttcgcc aagtccacgc ccatccacga gacgtaccag ccgcgctggg a 411

<210> 3155
 <211> 466
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-051-Q1-E1-C12

 <400> 3155

cacaggtcca ggactcgcgg gtccacacac gcgtccgaac acgcgtccgc ccgagggtgc 60
 cctcccaact ctgcgcgcgg tcccgcgatg ggctgtttct catcggccgc taagagatgt 120
 agaaagtgca agaagttcct ccgcagcgcg ggcgcgtgct gctgctcgcc gtcggcctcc 180
 tccgcccctg ctggtggtgt gcgcggcaac gaagaggcgt cgacgtcggc gctggcttcc 240
 gcgccagatg gcaagaaaaa gaagaggtgg aggaagagaa agttctggag aaagaagaag 300
 aaggccaaga aggagagcga cgatggcagc ggcgagctcg tggatctcgt caacagcttc 360
 tcggccaagt ccgacgtgtg caagaacgtg aatgcggccg aggagatcct acggggctgc 420
 aaccagaaca tggccagcag ggcgctgacg ttcagcnagc tgggcg 466

<210> 3156
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-051-Q1-E1-C2

 <400> 3156

accggtgcta aattccccggg acgaccacg cgtccgcagg gccaggggcc gagcaacctg 60
 gtgctccgcc cctcgccgtt acagcggcgc ctcggcctcc ggttccacag cgtctgcctg 120
 cctgcgcggc cctgtgaccg tgaggcgaca cgacgccgag agatcacccg cccccgcgat 180
 cgtgtccgcc ccgcttgga ttgtgaggta aagcgtgatg gcagcgcgc cggcgagggc 240
 tcgagccgac tacgactacc taatcaaact gctcctcatc ggagacagcg gcgttgga 300
 aagttgcctc ctgttacggt tttcagatgg atcattcacc actagcttca ttaccactat 360
 tggcattgac ttcaagataa gaactgttga g 391

<210> 3157
 <211> 406

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-C3
 <400> 3157
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 caattaagcc tccccgaccg ccacatctat taggtgcagc catgggtgcc tgtgcaacga 120
 agcctaagac gcttgagggg aaagccccag ctgaggccac catctccaca cccaagggtg 180
 cacctgagac cactaccatc cacattgagg ttgcggcaaa acatgcagta gttgagaagg 240
 tggaggagga caaggaggag gcactaacag tggcggcgaa acaagagcca gcagccacca 300
 ttgagcctca gcagattgct agtgagggtga ccacttcgga agtggcggtc gtcggtgtcg 360
 agcctgagaa caaagaggag gaggaagttg tggagaagaa cgtcat 406

<210> 3158
 <211> 388
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-C5
 <400> 3158
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 gcccaacgaa aatgtcgcgc gccacagctg cggtcctctt ctacatcctc gccgtcgtg 120
 ccctcagcgc ggccgaggca ccggcagagt caccgaaggc aggcagtcct gccaaaggcac 180
 cggccgagtc accgaaggca ggcagtcctg cagctcctgc caaggcaccg gagtctgctg 240
 ccacgagaac tgcccccgct aaggcacctc aagccgcctc ccccccgcc gttgccgctg 300
 ccccatcgct gtcgtcgtct aggaagtctg gtccagctgc cgcgccgacc accgccgcct 360
 ctacaccgtc ttcttcacg gacgaaga 388

<210> 3159
 <211> 396
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-C7
 <400> 3159

ggtctagaac tcccgggtcg acccacgcgt ccacagacac ttgggttagc caccctcgtc 60
 tcaccctccc tccctcacac aaataataag gaaagggtccc gcccttttcc tccgacatcc 120
 acaagggggg aggggaaaac acgtacattc acccggcggc aataatggcc tcggttcgg 180
 ctccggcgac gacgaccgcc gccgtcatcc tatgcctatg cgtcgtcctc tctgtgccc 240
 cggctgacga cccgaacctc cccgactacg tcatccaggc ccgctgttac tgcgacacct 300
 gccgcgccgg gtctgtgacc aacgtcaccg agtacatcgc gggcgccaag gtgaggctgg 360
 agtgcaagca cttcggcacc ggcaagctcg agcgcg 396

<210> 3160
 <211> 331
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C8

<400> 3160

ccacgcgtcc gccacgcgt ccgggtgtcg gccagaacg gcatgcacaa gcgcgtcggc 60
 agcctgcccc gcttgcgga ctctctgcgc ggctcgctca acccgtccaa ctacgtggag 120
 gtgcgcaaga accggtcggc gctgtggatc cggcacagcg acgccgtgtc gtgcctgagc 180
 ccgacggacc cggcgccagg gctgtcttac tccgggtcgt gggaccgcac cttcaagggtg 240
 tggcgcatca gcgactccaa gtgcctcgag tcgggtgggtg cgcacgacga caacgtcaac 300
 tccgtcgtgg cggcgcttca cgggctgggtg t 331

<210> 3161
 <211> 330
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-C9

<400> 3161

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 ggtggatcaa caaagaatg aatgccaatc cgatgctgtt cggatgaatc tgatacagac 120
 agggctccgtg tacgtaggcc gaatccggac ccaaccaaac agtactagac tggataaac 180
 tgcacctaac ttaaatgggt ctttcttctc aaacgccaaa ttaaatggcc caaaaaaact 240

gaaaaaaggg cggacgctct agatgattca agcttacata cacatacaag ctacgtcata 300
cctcatcaaa tgtatcacct aaattcaatt 330

<210> 3162
<211> 318
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D1

<400> 3162

accggtgcag aattcccggg acgaccacg cgctcgtata tacaagacga tacaaccctg 60
cgggtgttgg tcatgttcct aacctttttg cacactccac ttgctggttg caatatgcct 120
gcttccagat gcagaaagac attgaacctg acaatattca aatgcccatg catcagacgg 180
acatgtacat ccataatagg attttgacag aaattgcggc ggggtgcgcct gttgtaagct 240
tttgttccgg acattccggg attaaaagca aaggtaacct gtttccggaa aagcgaaaca 300
aaataaagga tccagaca 318

<210> 3163
<211> 437
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D11

<400> 3163

ccacgcgtcc gatcagccgg tcgggaacga tgaagaaaga tgatgacctc gagtcggcgc 60
tgctggccgc caaagagccg gcgccggcgc ccgccaaggg ctacgcgtac gcgtcacct 120
gcgcgtcctt ggcttccctc acctccatca tctacggcta caaccgcggg gtgatgagcg 180
gggcgcagaa gttcgtgcag gccgacctcg gcgtcacgga cgcgcagctg gaggtgctca 240
tcgggcgccac cagcgtctac tccctcgtcg gctcgtggc gccgggctgg gcgtgcgacc 300
gcgcgggccc gcgccgcacc atcgcgctgt cggcggcctt gttcctcgcc ggctcagccg 360
tcaccgccgc gccgacggc tacgccgcgc tcatggcggg ccagttcgtc gccggcgtgg 420
cctgcggatt cggcctc 437

<210> 3164
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D12

<400> 3164

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cgatgcctga ggctagacaa atactgagct agccttcaga aaaaaaaga aaagaaagag 120
attgagaagc agggagaaaa aatggcactg gccattgag gaagcttgag aaccagttaa 180
caagaattgc caacatattc ttggacaatc ttgttaacag agttttaagg tttcccagca 240
gagaagagcg cgtgcaacca ccacattcat ataattaata agcaagggtt agagaagagg 300
caacatgggc acaaagatga agaaggggat cctgaagccg ttccgctata tctcaaccat 360
catggatggg aaggaggctg aaatgcaa at tgggttcccg acggatgtaa aacacgtggc 420
acacatcggg tggga 435

<210> 3165
<211> 439
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D2

<400> 3165

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gcttccgccg gcgggcccgc cgagccggga gatggacggc ggcgccgggtg ccggtcggag 120
gagcgtcccc tctcctccg gattcaggag gaggggtccc cccgccgaga acgggcacgg 180
ccatgacgcc ccgccgccct ccaggcgggc ctccgcctcc ctctcccgcg gccactccac 240
gccgctgact ggcgagagga ccgtgaaaag gctgaggttg tccaaggcac tgacgatacc 300
ggatcacacg accgtgcacg aggcttgctg gaggatggca tcacgcaggg tagatgccgt 360
gttactgacc gactccaatg ctttgcctcg tgggatcctt accgacaagg acataacca 420
caagagtgat tgctcgtga 439

<210> 3166
<211> 122

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D3

<400> 3166

ttccggacga cccacgcgtc cgaagacgcg tgagcggacg cgtgggaaaa aaaaaaccgc 60
 ccgaactaag cacaagaat tgactgaaag aaagggctga cgtccctaga ggatttaact 120
 ta 122

<210> 3167
 <211> 400
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D5

<400> 3167

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 gtgctggagg agctcatgtg gaccatgttc tgcaacggca agaggggtgg ctacgcggtg 120
 cggcgggacc ccaccgagga ggacatcgcc gtgctggaga cgctgtgggc cgtctccatg 180
 ggcgggcggtg tgctccccgg caggtcggac atggacggcc ccgacggcga gatggcgtag 240
 atgcgcggga gtttcgagca caccgtcggg tcccgggact cggagtcgct ctacatggtc 300
 ggaccgcccc gcggcgactg cccggagctc gccatcttct tcgttaggct atgaattgaa 360
 ccgagcgaac catacgaatc gaacaatata gtgtacacgt 400

<210> 3168
 <211> 309
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D6

<400> 3168

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 cttcaattgt cagaaaaggg gttataaaga acatgaggcg caacattgca gatggaaata 120
 gttttgcatt tctttgtggc aacatagatg agcttgagca ctctgttcac gagaatttac 180
 ctagagtctc tgtagtcatg cctttgaacg gctttggcga acataagttg caaaattgga 240

gaagtcagat tacatcaatt tatggtgggc cactggaatt catgtttatc gtcaaaagca 300
gagatgatc 309

<210> 3169
<211> 353
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D7

<400> 3169

ctcgcggggtc gaccacgcg tccacggaaa ctctgaaac gagaccggcg gtcgacgagc 60
acaaggcgaa ggaggcgacg accgtcgtcc cagcacgcgtc ggcgaggag gagaagacca 120
ccaccgacga acaggccgct gccaaactaac tgattacaag gaggccaaga cctagacgac 180
ttgcatccac cacaatccat tttgtccaac tgaattcggc cgccggccgg gcggtccctt 240
ttggtgtacc ccacaccatg gttcctttcc ctgatattgg cccggctctgg actcactcaa 300
taaaatgtgt tctatctata gaccctttcg aaaaaaaaaa aaaaaaaggg ggg 353

<210> 3170
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-D8

<400> 3170

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gcggcgccgt cttacgggca gccgctgtgc ggcgccgggg cgaggaagag gaaggacgcg 180
ggcgtggtcc aggaccagga ccaggaccag gatgcagggt cgtcgttgcg ggggtggttaag 240
aacgccgcgc tggtcgtgct ggaaacggtg gaggaagagg cggacgcgga cactgagagg 300
tcgtccatcg gcgcggcgtc cgaggacggc gacgacgagg acgaggagga ggtggctagc 360
cgcgggacga atggcgccgg ggccccgctc gcctgcatgg acatggggcc cctcc 415

<210> 3171
<211> 445

<212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-D9
 <400> 3171
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 gtggtcggtta gtgcagggtgc aggtgctggt ggcggtggca ttagcatttc tggtaggcgg 120
 tgcctggtgt ggtcctccca aggttcccc gggtaagaac atcacagcca aatatggtag 180
 tgattggcta gatgccaaagg cgacatggta tggcaagccg acagggtgctg gccccgacga 240
 caatggtggc ggctgccccg acaaggacgt gaataaggcc cctttcaata gcatgggcgc 300
 gtgtggcaac gtccccatct tcaaggacgg tctaggttgt ggatcctgct tcgagatcaa 360
 gtgtgacaag ccagcggagt gctctggcaa gcccggtgtg gtgtacatta cggacatgaa 420
 ctacgagccc atttgcggca tacac 445

<210> 3172
 <211> 415
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-E1
 <400> 3172
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 cccacgcgtc cccccacgcg tccggtacc ctgctgctg tctcactcac cccgccttca 120
 cgctccctc accaaataag gtcccgccct tttccgacat tcacaggggg gacaggaaat 180
 cagcggccat ggctcgatt ccggcgacga ccttcgccgt catcttatcc gtctctttct 240
 gtgccgcggc tggcaccgcc gtcgacaacg acctccccga ctacgtcatc cagggccgcg 300
 tctattgcga cacctgccgc gccgggttcg tgaccaatgt caccgagtac atcgcgggcg 360
 ccaaggtag gctggagtgc aagcactttc gcaacggcaa gctcgagcgc tccat 415

<210> 3173
 <211> 440
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-E10

<400> 3173

ccacgcgtcc gatcgtgagc agcgacaaga ccatcgacgg gcgcgggagcg caggtgcaca 60
tcgtggggcgc gcagatcacg ctgcagaacg tgcgcaacgt gatcctccac aacctgcacg 120
tccacgacgc cgcggcgcac ggcgggcgcg cgatccggga ctgcgagcac cactggggcg 180
tgcgcgggga gagcgacggc gacggcgctc ccgtgatggg gtccagcgat atctggatcg 240
accacctgtc catgagcagc tgcgcggacg ggctggtgga cgcggtggac ggctccaccg 300
ccatcacctg ctccaacggc cacttcacga ggcacgacca cgttatgctg ttcggggcca 360
gcgacccgc gtccaaggac agggagatgc anggtcacgt cgccttcaan cacttcggca 420
aagggtggt gcagcggatg 440

<210> 3174

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E11

<400> 3174

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gtaccggcg cggcgctcgg cgtacgtggc ggcgatgtcg gcggtgtcgt tcgtgtccat 120
ggcgaacgag ggctcgcgg agtccgcgg cgaccacatg ccctactcca agttctggca 180
cgccgtggcg ggtgccgcgg gcggggacac caggcagcgg gcggggatgc cgctcctgcg 240
aagccgggac ggcattgtgc tggcctacgc cccggcgctg ctgcgcggcg ccgcgtcctt 300
cgcggtgccg ggcgccgtcg agggcgcgcg cgcgagctg ctgagcgccg cgctcgccgc 360
gcacttcctc aagcgggtcc tcgaggtgct gtgcgtgcac cggtagacgc ggagcatgcc 420
gctgggc 427

<210> 3175

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E12

<400> 3175

ccacgcgtcc ggtttgattt ccagaagtac atcaagcggg ctctggagga tgacttcaag 60

gtgatcgtgg ggatcagtc tctctgtgg gcttctgctc tcatcttctt cttcctcaac 120

gtcaatggat ggcacacat gctctggatc tccatcatgc cggtggtgat catcctgtcg 180

gtggggacga agctgcaggg catcatctgc cgcacggcga tcgacatcac ggagcgccac 240

gccgtcatcc agggcatccc gatggtgcaa gtcagcgact cctacttctg gttcgcacgc 300

cccaccttcg tgccttctct catccacttc accctcttcc agaatggctt ccagatcatc 360

tacttctctt ggattctgta tgagtacggc atggactcgt gcttcaacga ctcggaagag 420

ttcgtccttg cacgactctg 440

<210> 3176

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E2

<400> 3176

gtaccgggtcc agaattcccg ggacgacca cgggtccaca cacacacaac cagatctccc 60

ccaaatccac ccgtcggcac ctccgcttca agatgcagat ctttgtgaaa accctgactg 120

gcaagactat caccctcgag gtggagtcgt ctgacacat tgacaacgtt aaggccaaga 180

tccaggacaa ggagggcatc ccccagacc agcagcggct catctttgct ggcaaacagc 240

ttgaggacgg ggcacgctt gctgactaca acatccagaa ggagagcacc ctccaccttg 300

tgctccgtct caggggaggg atgcagatct ttgtgaaaac cctgaccggc aagactatca 360

ccctcgaggt ggagtcctct gacaccattg acaacg 396

<210> 3177

<211> 416

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-E3

<400> 3177

attcncggga cgaccacgc gtccgattcg tggatagcgg tgccacaacc tctctgctg 60

tcgctgctgg tcgccgtgct agcgggtggcc gccgatgtcg ccaacgccgg ccacgccaaag 120
 cccctaacgc ctggcgggcg cgtggtacac gacaaccacg gcaagttcac ggccggggccg 180
 tggaaacccg cccacgcaac cttctacggc gggcgtgacg ggtccggcac cacggcgggc 240
 gcgtgcgggt acaaggacac gcgcacgcag ggttacggcg tgcagacggt ggccgtgagc 300
 actgtgctgt tcggtgacgg cgcggcctgc ggaggggtgct acgaggtgcg gtgcgtggac 360
 agccctagcg ggtgcaagcc cgacgcggca gcgctggtgg tgacggtgaa cgacct 416

<210> 3178
 <211> 420
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-051-Q1-E1-E4

<400> 3178

cgctgcatt caccggtgcg agaattcncg gatcgaccca cgcgtccggg tttgtgcaac 60
 acccgctcac cttccaggtc ggtaagggat ccaagcctgg ccacctgatc ctcaccccca 120
 acgttgccac catatccgac gtggagatca aagagcatgg tggcgatgac ttctccttta 180
 cgctgaagga gggcccgacc ggcacctgga cactcgacac caaggccccg ctcaagtacc 240
 ccctttgcat ccgctttgct gtcaagtctg gtggctaccg catcgccgac gacgtcatcc 300
 ccgccgattt caaggctggc accacttata agacgacact cagcatctaa tcagcatctg 360
 aagatgaact atatttcaaa agagctcatc tggcgacgt gttagcaaga caattttttt 420

<210> 3179
 <211> 355
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E5

<400> 3179

ccacgcgtcc aagcgctcac cgtccttcgg taggtgcatt gcttcgggtgg tccatcatgg 60
 cgcagcgagc ggtggccacg atgacgacta agaagtcct cctcgtcate acgctggcgt 120
 ccgcactcca tggcacagcg ccagacgccg cgaatgctcc cggcgggggcg ttcagcaact 180

gggtggcgat gaaccagcag acctacgcgc tgtacgcgca taagtccgtc agggacggtc 240
gcaaagagcc cctggacaag aagctgtctg atgcggacaa taagaacgtc acgtacgtgg 300
tggaccccag ctgtaatggc gattacacca atatcaccgt ggcgctagat gatat 355

<210> 3180
<211> 184
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E6

<400> 3180

aacacgcgtc cacgcgctcg ccgtccttcg gtaggtggat tgcttcgggtg gtccaccatg 60
gctcagcgag cgggtggccac gatgacgatt gtgaagccca tcctcgctct caccgtggcg 120
tctgcgtcc atggcacggc gccggccgcg gcgaatgcgc ccggcggggc gttcagcaac 180
tggg 184

<210> 3181
<211> 393
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E7

<400> 3181

ccacgcgtcc gagcgatatc tggatcgacc acctgtccat gagcagctgc gcggacgggc 60
tggtggacgc ggtggacggc tccaccgcca tcaccgtctc caacggccac ttcacgaggc 120
acgaccacgt tatgctgttc ggggccagcg acgccgcgtc caaggacagg gagatgcagg 180
tcaccgtcgc cttcaaccac ttcggcaagg ggctgggtgca gcggatgccg cgctgccgtc 240
acggcttctt ccacgtggtg aacaacgact acacgcactg gtcacgttac gccatcggcg 300
gcagccggaa cccaccatc atcagccagg gcaaccgctt ccgcgccgtc gacgacagca 360
ggttcaagga ggtgaccaag cgggagtaca cgc 393

<210> 3182
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E8

<400> 3182

ccacgcgtcc acccacgcgt ccgcggacat cgacgaaagc tagccagcta gtaacaagaa 60
caaaaaaacac catcatctca tccgcccgtc tcaacgccac cctagccctg tgatatacaa 120
tggggggcca gagcacgagg atgggtggcg tggccctggt ggtcctcctg gtgggtggcga 180
cggcggttggg gcccacggcc accgcgtacg gctgctacga cgactgctac gagcgggtgcg 240
ccaacggcaa gaaggacgac cccgcctgca ccaagatgtg caaccaggcg tgcggcagca 300
ccgacaaggg cgccgccgcc ggcgcgccgg cttgatcgac ccgggcttta tcggcgcgcg 360
ggctcagctc gatatcatca tatacaat 388

<210> 3183

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-E9

<400> 3183

taccggtcca gaattcccgg gtccaccac gcgtccaaat ggcgttattg tatatctctc 60
tattcccgtt aactgtacaa aactttgtat ttgcacacag aatgtacacg gaggtaaata 120
ttccccatac ataccctgga acaaattgta ctaattgtca cagattgact gcactcacia 180
ttacacagca ttcttttggg catttggtgg gtaaataatga aatctctttg ggaatatacc 240
tgtatatgca gtggtagaga atatcgctgt tccttttatg gtggatgcac tggaaaggga 300
agaattgtac tctgaccagc cacagcatct cttttgatca tgtccatatt ctgctgtcag 360
tgaaaaaaga gatttcatta tgtcatttaa cacggatcac caattatgtg agcaggggtg 420
tctgacattt 430

<210> 3184

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-F1

<400> 3184

cctgcangta ccggtgcaga attccccgga cgaccacgc gtccgcccga tgatcctcaa 60
 ggcgtggaag aacgcgtgcg aggcgacggg ggtacagaag atcgatcatcc cgccgggcaa 120
 ctacctgacg ggcgggctgg agctgaaggg cccctgcaag tcctccatca tcatccgtct 180
 cgacggcaac ctgctcggca ccggcgacct cagcgcgtac caaaggaact ggatcgagat 240
 cgagaacgtc gagaacctgt ccatcaacgg ccacggcacc atcgacgggc aaggagccct 300
 ggtgtggagc aagaaccagt gccagcattc ttacaattgc aagatcctcc cgaatagctt 360
 ggtgctggat tttgtgacga acgtccagat tcgcggcatc acgtgctca acagcaagtt 420
 cttccanctc aacat 435

<210> 3185
 <211> 331
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-F10
 <400> 3185

ccacgcgtcc gatctaccca aaccttgaaa attgctttgt cagtcacaca catgtgttcg 60
 tgccctccagc aagatgatcc gatcgtggtc gtgctagtgt tcttgatgga cggcactgtc 120
 tcacggacgc cgtaatatcc ttgtatctcc tcatatcacc accagttata acaatgactg 180
 cctggatgct aataccaaat cgcatgcaaa cttactgat gccgatcgcg acgaaacagg 240
 tgacggctac gaatgcagag acgtgcacag acaccgcttc aattccatgc gtacatccga 300
 ctctatagtt atctggattg agcgtcagca t 331

<210> 3186
 <211> 433
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-051-Q1-E1-F11
 <400> 3186

ccacgcgtcc ggtggatggc ggcgccacga cctctcctat tgccgctgct ggtcgccatg 60
 ctacgcgtgg tcgccgatgt cgccaacgcc ggccacgcca agcccctgac gcctggcggg 120

cgcggtgttac acgacaacca cggcaagttc acggccgggc cgtggaaacc tgcccacgcg 180
accttctacg gcgggcgggg cgggtccggc accacggcgg gcgcgtgcgg gtacaaggac 240
acgcgcgagc aggggtacgg cgtgcagacg gtggctgtga gcacggtgtt gtttggcgat 300
ggcgcggcct gcggcggtg ctacgaggtg cggtgctgg acagccccag cgggtgcaag 360
cccgacgcgg cggcgctggt ggtgacggcg accgacctgt gcccgnccaa ggacaagtgg 420
tgcaagccgc cgc 433

<210> 3187
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-F12

<400> 3187

ccacgcgtcc gatcctgcgg aggctcggcg ccgacatcga ccctgaccgc ctaccgcaaa 60
tcctgtacga agacgaggac cgggacaagg tgggtgctgc gtcggacgac gacctcgcgg 120
cggcggtgga acacgccagg ctgcgccgat ggaaggggtct gaagctgttc ctggactact 180
ccggcaccac cgggcgcagg aaagcgggtg ccaccccacg tggcgccatg gcggtgggca 240
tgtccagccg ggacgcgtgg gcggcggcgt acagcggggg cgcgcgccgg gctgccctcg 300
tcaactggcat cggcgtcatg gcgtacctgc gaagatctgc ctagctagtg tggtggcgcg 360
gcggcgcggc gcgcataatt gccaatgcaa gagcaagggg tcctgtcctg cctttcgaat 420
cacacag 427

<210> 3188
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-F2

<400> 3188

accggtgcag aattcccggg acgaccacg cgtccacggc cgtcgagcga gcagtctccc 60
aattccacc aataactaat aacatctcct cgaacgccag gttccttgga ccactatata 120
caggagcgac gaagtgatcc acccgccagc catggagatg aagaaggtcc tctgcgccgc 180

cctcgtcgcc gccgcctcgg ccaccgccgt gctggcctcg gtcgcctccg aggcgccttc 240
cgaggcgccc gccggcgagg ccggtggtgc ggctggccct agcgcaagcg gcgccgccc 300
cgccgccgtg cccgcgcggc gggcgctcgt cgcctccttc ctcgcctact acctccactg 360
agcgacgacg cgcggggcgg caacgttggg atgcatcgtg tttggttcat ccgat 415

<210> 3189
<211> 381
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-051-Q1-E1-F3

<400> 3189

attcncggga cgaccacgc gtccgatggt gatggacttc gtgaacaacg gggaggtgtc 60
cggggtcacg ctgctcaact ccaagttctt ccacatgaac atgtaccggt gcaaggacat 120
gctgatcaag gacgtgaccg tgacggcgcc cggggacagc cccaacacgg atggcatcca 180
catggggcagc tcacccggga tcacgatcac caacaccgtc attggcgctc gtgacgactg 240
catctccatc ggccccggga cctccaaggt gaacatcacc ggcgtagact gcggccctgg 300
ccacggcatc agcatcggca gcctangggc gtacaaggac gagaaggacg tcacggacat 360
caacgtcaag gattgcactc t 381

<210> 3190
<211> 377
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-051-Q1-E1-F4

<400> 3190

gccccgtaaa gatggggatt cattaacaac cggctactgc agtttcttac tagtagtaca 60
nattatacat cactagttta cgcaagagct tgctcaaaaa gagagtacat gggattacta 120
ctctcccta tacatcgatc gatacaagta caaggcgcg gcgcagcggc gtgccatgcc 180
ggttcaagcg cgcggccggc catgtgcgcg cgtgttgggc ccgggcacat caaaagctcg 240
gtacgacgcc gtagccgaag tcgagcacat atgacatcgg cacggcgggc tcggcctcgg 300

cctcagcgtc gtcngcgctg gcgtcnccgt cgtggtcagc acgcttggca aaccggccct 360
tgatttcgcg gcgctct 377

<210> 3191
<211> 268
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C8

<400> 3191

ccacgcgtca ggtggaaact ggaccgccct tgcgctgatg tggaagacaa ctccgattac 60
gatatttttc ttgttgacat tgatgccttt gctggacccc cctggcctct tgttgttcaa 120
ttggaacttc agaaacagct gcgctgttat catctctgca ttgttcgggt tccttcttca 180
gtggctcgtt gctttggcac tcggcgcgac gtcagctttg tctcatgttg tgctgggcca 240
attcaaaacg atcgtcatca tgctctcc 268

<210> 3192
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-C9

<400> 3192

ccacgcgtcc gcggacgcgt gggcggacgc gtggcgctcg acgccggcct ctctctcac 60
ccgctcggac agtcggagcc cggcggccgg agggcgacgt cgtccctaata agataactaat 120
aatttatcac tatacataac caatatataa gccatgggca agcgcagcgt ccctcggtac 180
cctgaggacg aggacaaagg cggtcgtgc ggctgcctgt gctggtgctg ctgcttctctg 240
ttgttcatcg tggcggcgct ggccggcacg gccgcctact tcttctctgt gtacaagccc 300
atggcgccgt cctactccgt gagcaacatg tccgtctcgc agttcgactt cagcacctcc 360
gacctgacgc tgtacgtcaa gctcaccgcc tccgtgcgcg ccgagaaccc caac 414

<210> 3193
<211> 237
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D1

<400> 3193

tttatcaatc atcaatcaca ttgttaaata tatcacatac attttttatt attacattgc 60
atgtacgtga cattgttgta gaatagaaga gaagtatttc cccttccaaa caaacagaaa 120
agaagggaaa acgaagtctg taatcgtagt atcgaacaca caatcatgtt tccctttcct 180
cgatcctctc ttcttcccaa accgagaggt gaaccagcag cctccaataa aaggcca 237

<210> 3194

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D10

<400> 3194

ccacgcgtcc gcggaacgct gggggagggc cggcgtcggc gtgcctagct cgatcttgaa 60
ccatagctag ccagcatggc gccagcagc agcatagcag tactgctgct cctcgctcgtc 120
gccgctgctc tctccaacgt cccctcctcg ggcgccttg cctcctcgtc gtcgtctctg 180
ctgcaccagt cgtctccgtc tgagagtga actgagaccg acagtagcag cggagaatct 240
tcttcgtcgt cgctcgtcga agaggccggc gagaaggaga aggagaagga gcaggagatg 300
gagaaggcgg tcgcggcgga gaaggctgcc cagcaggagc tgctcaagta cgccaaggag 360
aagggcacgt tgtcaccgac caacggcacg ggggtggtaca agggcatcgc ccggga 416

<210> 3195

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D11

<400> 3195

ccacgcgtcc gcgagaatgc cagcagcagc tcattctgtg agaagagcta cgagctgcct 60
gatggtcagg tgatcaccat tggggcagag aggttcagat gccctgaggt cctcttccag 120
ccttccttca ttggtatgga agctcctgac atccatgaga ccacctacaa ctccatcatg 180
aagtgcgatg tctacatcac gaaggacttg tatggtaaca ttgtgctcag tgggtggcacg 240

accatgttcc ctggtattgc ggaccgtatg agcaaggata tcaactgccct tgcgccgagc 300
 agcatgaata tcaaggtggg ggcaccgcct gagaggacat acagtgtctg gataggacga 360
 tcgatccttg cctcgtctgag caccttccaa cagatgtgga tctcaaacgc tgagtat 417

<210> 3196
 <211> 303
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D2

<400> 3196

taccgctcta gaattcccag gccgaccac gcgtccagcg tcgccgagcc atgacgatga 60
 caatagccgc cgtgctctgc ctgctcctct tctctggccg tctcgccgcg gcggagaaga 120
 ctttccgcgg agggcggaggc ggaggctacg gcgggttgga ggccggtggc ggaggcggcg 180
 gcggcggtta ctccaccccg agcgaggcag cgccatccac gcctgccgct ggggagacga 240
 cgaccccttc gtcaggcggc ggttactcca cccctagcga ggcagcgcca tccacgcctg 300
 ccg 303

<210> 3197
 <211> 309
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D3

<400> 3197

tacggctcta gaattcctgg gtcgaccac gcgtccacac cgacaccgcc gccggctgcc 60
 ctccatctcc tcgccgtgc ctctcgtttc tcttttcaat aatcaagatg agccgtgggtg 120
 gtagtgccgg tgggtgtcaa agttctctgg gttatctctt tggaagcggg gagcccccca 180
 aaccagcagt ggcaccagct gcaagtgtc cacctgttga gaaaccatct gctgcaaaga 240
 ctgatgcggc caagcaggtt gctgctgggg ttaccagcca aaccaataac taccacaggg 300
 gctgatggt 309

<210> 3198
 <211> 303
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D5

<400> 3198

cggtctagaa ttcccggggcc gaccacgcg tccgttgaag gttgatggaa tggatgttct 60
tgctgtgaag caagcgtgca aatttgcaaa agatcatgct gttgcaaag gcccaattgt 120
ccttgagatg gataacctaca ggtaccatgg ccactctatg tcagatccag gaagcactta 180
ccgcaccagg gatgagattt cagggtgtag gcaggaacgg gacccaattg aaagggttag 240
aaagttgctt ttggctcacg acttggcaac tgctgctgag ctcaaggata tggagaaaaa 300
gaa 303

<210> 3199

<211> 309

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-D6

<400> 3199

acgccggcag gtaccggtct agaattcccg ggccgaccca cgcgtccgct tcattctctt 60
gccttcgcta cgcaattccg atccacgctg cgggccactt gtgacgactg gcggaaccgg 120
cgagaaacag aggcggggcga gcggcgatcg gagatggcgc cggagaagcc ccggaaggaa 180
caggaggagg agttgatgct ggaggatgga ggcacgagg agagcccgcg ccgcagcttc 240
gaggactgcg gcgactccga ggaggaccgc ggggagggcg atgacgagga ggagcgggac 300
agcgaccgc 309

<210> 3200

<211> 359

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-D7

<400> 3200

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actgggaggg accaagtaca tggatcatca aggcgaacct ggagctgtca tccgtggcaa 120

gaagggatcc gggggcatca ctgtgaagaa aacagggcag tcactcatca ttggcatcta 180
cgacgagccc atgactcccg ggcagtgcaa cctgggtgggtg gaaaggctgg gcgactacct 240
gctcgaacag gggatgtaat gacaaccctt tcccctggaa tgcattgtga tgatgtttgc 300
ctgggggttt ttccccccaa anaaaccccc cttttttttc cccccggggg ggtttttttt 359

<210> 3201
<211> 361
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-058-Q1-E1-D8

<400> 3201

cggtcaggaa ttcccgggcc gacccacgog tcaggtctct gtcgcgctgt tgtaaacggg 60
ttagcagaag aacacacagg gtgacaacaa atccttggtc ggttatttct aatacatatg 120
gattggatga gattggaaaa aattaagaag aagtttaact tgtttgcgat tcaaacacat 180
ccaatctcat tcaattcaca tggattgaga gctaaccgaa caagcctgta gttggacaag 240
ggtgtaacac ttatttgtca ggcgtaccgg gcacagaccg cttcctatatt gttcngtggg 300
ggaantggnn tttaaaaaan cccnnttggg nnnttttaaa aaaaaaaggg gggccccccc 360
c 361

<210> 3202
<211> 412
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-058-Q1-E1-D9

<400> 3202

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tcgcgctggt cctcgtggcc acggccatag ccgccgctcc cggcggtggg tttgtcgtca 120
ccggccgcat ctactgcgac aactgccgag ccgggttcga gacaaacgtg tcccacgcca 180
tccaaggcgc gacggtggag atggagtgcc gccacttcga gtcgcagcag gtccacgaca 240
aggcggaggg gacgacgggc cccggcggct ggtacaggat ggagatcagc ggcgaccacc 300

aggacgagat ctgcgacgtg cgctgtctca agagccccga ggcggaactgc gccgagatcg 360
accactccccg cgaccgctgc cgcgtcncgc tcacccgcaa cgacggcatc aa 412

<210> 3203
<211> 306
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E1

<400> 3203

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cgatcgagga gggaggaacg ccagagaccc ggcgggcgcg acgatggctc cgcgcagctc 120
atcggcggcg acgtgcctgt gcctcgtctc cgccgcggcc acgctggcgc tggcccacgg 180
ggcgcaagga ggaggaccat cggcatcggc ggcggaacctg gacaaggta cggccgagac 240
cttcctcgac atcgagatcg acggcaagcc tgcaggccgg atcgtgctgg gactgtttgg 300
ggacac 306

<210> 3204
<211> 402
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-058-Q1-E1-E10

<400> 3204

ccacgcgtcc gccacgcgt ccggacaaga tggcgtgcac aaacaatgcg atgagagcct 60
tgttctctct ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca aagggcacgc 120
atgcgaaagc gtccgggcct ggtgggtcct tcgacatcac caagttgggc gcctccggca 180
atggcaagac agacagcacg aaggctgtgc aggaggcatg ggcacggcg tgcggcgga 240
ctgggaagca gacaatcctc atacccaagg gtgacttcct tgcgggacaa ctcaacttca 300
cagggccttg caaggcgac gtgaccatcc aggtggatgg caatctgctg gcgaccacgg 360
gacctaagcc agtacaagg acatggtaat tggatcgaga tt 402

<210> 3205

<211> 129
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E11

<400> 3205

ttctctatag tgagtcgtat tagttatcgc ttgcacgtac aatgcgatga gaggccttgtt 60
cctcctgttc ctcttctgca tcttgcattg tcataatgaa gattcagggg tcatgggggc 120
gaaagcttc 129

<210> 3206
<211> 412
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E12

<400> 3206

ccacgcgtcc gatcatgtct ggtcgttcgt ggacaataat ggcgccctctc ctacgcgtcga 60
tgctgctcgt cgggctcgcg gcgggctccg aggaggagga ggacggcggc ggcaaaaaga 120
agccccacgt caaccacggc aagtttaagg cggagccgtg gacggacggg cacgcgacgt 180
actacggccg ggcgccacgg ttaaactgac acaacggaca gcggcccgtg cggctacaag 240
ggcgagctgg ggaaagacta cggcaccctg acggcggccg tgggcccgtc gctgtacacc 300
aacggcaccg ggtgcggcgc gtgctacgag ctcaagggcc ccaagggcac cgtgggtggtg 360
acggccacca acgaggcccc gccgcccgtg agcgggcaga agggcgagca ct 412

<210> 3207
<211> 310
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E2

<400> 3207

cccaggccga cccacgcgtc cactcgaagc cgaaggactc gtgccttctc ttcttccttg 60
gcatggagga agtagctgtt tcgcctatga tcgttgccgc cgtagtgtg gacaacaatg 120
gcgctgacgc ggtctcctgc actgccatcc ctacgctaac aataagccta gaggagaaag 180

aaaatatcaa tggggatggtt cccacgatca cctcggccgc aagcaacgag gaggaggcgt 240
 tgttcagtgt cggagaatcc accaaggacg atggccatcg cttgacgaat ggaatggcct 300
 tcccccaaaa 310

<210> 3208
 <211> 332
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-058-Q1-E1-E5

<400> 3208

ccacgcgtca ggcgcgcgg tgaccgcccc acctcctccg tcgccttctt ctccgcgcgg 60
 ggcgggctcg gctcggcccc ctccagcctg ctgctccacc tgctcctcct ccactccctc 120
 ttatagcctc cagcctcccc tcgcctcccg ccacccccta tggccgcgct tttcttccac 180
 cacgtcgctg ggcacctcac cgtcggcaag cccgaggctg ccgagctgca cgacaccgac 240
 acgctcgacg acgccgcgcy cgccatcgcc gccnagcccc cggaaggggg gggggcccg 300
 gcccccccg ggggtttttg gggggccccc cc 332

<210> 3209
 <211> 272
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E6

<400> 3209

ccacgcgtcc gccgagaagg ggtccgggat ggccaccttc gtgcaccgca agtacagcga 60
 caaggaggac agcgacatgt tcaggtgcta cgacagctgc tccgacgacg tggaggaggc 120
 cgtcgccac ctcaacggcc tcgtccggga gccaccgac gccaaagtcc tcgagctcaa 180
 gtcgtggctc tcctccacgc tcggcgccac ctccacctgc gaggacgcct gcaaggacct 240
 gcccaagacc agcgacaagg acgacgtcgt ca 272

<210> 3210
 <211> 273
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E7

<400> 3210

ccacgcgtcc gcggacgcgt ccgcccacgc gtccgggtgg tcaagatgta ctgggggtgac 60
ccgagggaga aggtgtgcga cgcggtggag gagctccaga tcgagtcgct cgatcatgggc 120
agccgcggcc tcggccagat ccaaaggatt ctgctgggaa gtgtgacgaa ctacgtgctg 180
tccaatgcgt catgccccgt gaccgtcgtc aagtogaagt agtggctctg gcctttcatt 240
tccagaaaga tgaatctgca gtaacctat acg 273

<210> 3211

<211> 270

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E8

<400> 3211

ccacgcgtcc gccacgcat cggaattcct gcatgacgtg gaggtgctca actgcatggg 60
caacaccagc atggtgctcc gcctcggagc atgcgcggag tacggctgtc tcgtatatca 120
ttacatggat cactggagca tcaacgaacg gctgttatgt cggggcagca cgccacctct 180
cgcgtagacc tagcgggtca ggatcgcagc tgagatcaca acagcgcagt tgttccttgc 240
acacacgaag ccagagccgc tgggtgcaccg 270

<210> 3212

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-E9

<400> 3212

ccacgcgtcc gcgacgagcc agggcacctc gcgccgacag gcctgttcct cggacctacc 60
aagtacatgg tcatccaagg cgagcctggg gccgtcatcc gtggcaagaa gggatcagga 120
ggcatcaccg tgaagaagac agggcaggca ctcgtggttg gcatctacga cgagccgatg 180
acgcctgggc agtgcaacat ggtggtggaa aggctgggag actacctgct tgaacagggc 240
atgtaactac tacgtaccag ctggaatgca tgtcgacgac gatggtttcg agtttcgact 300

tccaataata gtaacaacaa agcaaaggcc ttctctcccg cgtatttgct ttggctcttc 360
 ttctccacgc cataagatat ctagcaattg gtgactcgcc ttaattagtt cgcttttg 417

<210> 3213
 <211> 338
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-058-Q1-E1-F1

<400> 3213

ccacgcgtcc gcgtggatgg cggcgccacg acctctcctg ttgtcgctgc tggtcgccat 60
 gctagcgggtg gccgcccgatg tcgccaacgc cggccacgcc aagccccctga cgcttggcgg 120
 gcgcgtggta caccgacaacc acggcaagtt caccggccggg ccgtggaaac cagcccacgc 180
 gaccttctac ggcgggcggg acgggtccgg caccacggcg gcgcgtgcc ggtacaagga 240
 caccgcgcgcg caggggtacg gcgtgcagac ggggtggcgt gagcaacggg ggttgggntt 300
 ttttgggggt tttttttttt tggggggggg gggccccc 338

<210> 3214
 <211> 437
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-058-Q1-E1-F10

<400> 3214

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 gcgggcggca gcctgcggt gcagcggcag gcgtgctgcg agccgtcggg ggcgcgcgtc 120
 cgggcggtgt tcgctgccg ggccgcggcg tcggggagcg cggccgacct ggctccggg 180
 ggcaggaggt cgtccggcgt gccggtgttc gtcattgatgc cgtggacac cgtcaaggag 240
 tgccgcaccg cgctgcaccg ccgcaaggcg gtgcaggcca gcctctccgc gctcaagagc 300
 gcgggcgtcg agggcgcat ggtggacgtg tgggtgggca tcgccgagcg cgacggcccc 360
 ggccggtaca acttcgcggg ctacgcggag ctcatggaga tggcgcgna agccgggctc 420
 aaggtccagg ccgtcat 437

<210> 3215
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F11

<400> 3215

ccacgcgtcc gcggaacgct gggcgaagg cgaagggttca catgccgctt gcttgggtgtg 60
attttagaag aaacagctcc agaggagctt cagaaccatg tcacagtga gcttcccggtg 120
gtggagggttc tccttgagat tgcaaaattc tgtgatgtgt atttgatgga gcgcattctt 180
gatgatgaga gtgagggaaa ggttttatcg gccctgagtg aagctgggct ttttgggtgtg 240
ggtggcttga taaaagataa ggttctcttc tgtagcacgg agaatggccg tacatctttt 300
gttcggcaac tcgagcctga ttggcatatc gacacaagtc ctgaagttgt tcaccaatta 360
gctaggttta tcaaatatca actgcacatc tccccgcagc gacctgaaag aat 413

<210> 3216
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F12

<400> 3216

ccacgcgtcc ggttcatggt gctatttagg cgtgaagtat catttggaga ctccttatac 60
ctctgggaga tgatgtgggc tctagaatac gaccctgaca ttttcttcgc aacatgcgaa 120
gaacaagggtg cagtacataa aaataaagtt tctaaatcca aactgaaagg actgcgccat 180
tttggcaagt gggataagga caaggataag gaagatgata agaatggggc tgaggacggt 240
gaagatggtc cggttccgat ttcagtcttc atgggttcaa gtgtcctcaa ggagaagaga 300
gaaaagctgt tacaagaagc cagaggactg gatgatctta tcaggatatt gaacgatgta 360
aatgggaact tagatgctaa gaaagcttgc gctggagcat tgaaacttca caaa 414

<210> 3217
<211> 353
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-058-Q1-E1-F3

<400> 3217

attcccaggt cgaccacgc gtccgggtccg gtccggttct ctccgccgcg gcggcggatg 60
gccctgccgc tctacggctg caggctctgc gctgtgcatg atgccatcat cttctgccac 120
tgctgtgacg ccaggctgtg cctgcactgc gacgccgcgc tgcacggggc taccgaggcg 180
ggggcgctcc acccgcgcg cgggctctgc gacgcgtgcg gcgccgcgc gcccgcgctg 240
cgctgcgacg gcaccgtgac gctgtgcgcc gtgtgcgtcg gccgcggtgc tccnngcggt 300
tgggaaacccc cncgggggg cccaaaaaac ccccccccc cccggggggc ccc 353

<210> 3218
<211> 291
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F4

<400> 3218

attcccaggt cgaccacgc gtccgctgag catcccaggg acggcgacaa atgggggtcgg 60
gagatccatc gtgtctgcga atctgcgtgc ttgccgttgc ggcggtatgg aacgggggacg 120
ggatagtgcg ggatctgctt tggaaagttt cctaattcct agtactatgc ttttacgcaa 180
aattgggtcca atttctgtat ggttcctcta aaatgtgctg tccaaacggg gccgtgttct 240
atgcaataga aatcatgcta ctcttaccat acttcgatgg ttttgcaaa c 291

<210> 3219
<211> 335
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-058-Q1-E1-F5

<400> 3219

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ggcgtcttga tatattggat tgcactgcat gctttgcttg ctagttttat ttgaactctg 120
taaagatgta gccatctcct ggcgagtgc tgtacgtac tctgtgtcta tagcaagtta 180

tatctaaaca gaagcagttt gcactgatac cgtgattcct ttcgaaaatg ttaccgaata 240
 cttgagccgt attggcagct gcagaaatct tcaaatgaat ggccaaantt tttttttttt 300
 tccccaaaac ccnccccccc ccccnctttt ttttt 335

<210> 3220
 <211> 270
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F6

<400> 3220

ccacgcgtcc ggcggcatcc tgcagataga gcgacagggt ctgctgaaac ataaggactg 60
 cgctcgtgtgg atcactgggc tacgcggttc acgtgatgtc tgcaaaagct gatctcgtca 120
 gatttaatta cgagcacaga tacttccttt tatatgtata cacctgtctg acagtctgtc 180
 agtccgtcag tcttgacttg atgagggaaa agcacactcg cgtgcgcgct gagccgcgag 240
 ctgtatcgca taggccacct cactacgtc 270

<210> 3221
 <211> 272
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F7

<400> 3221

ccacgcgtcc gcgagattct acgcgtggat aacctgggtc tcaccggcaa gggaaacctt 60
 gacgggcagg gccagctgt gtggagcaag aactcctgca ccaagaagta cgactgcaag 120
 atccttccca actcgtcgtt gatggacttc gtgaacaacg gggaggtgtc cggggtcacg 180
 ctgctcaact ccaagttctt ccacatgaac atgtaccggt gcaaggacat gctgatcaag 240
 gacgtgaccg tgacggcgcc cggggacagc cc 272

<210> 3222
 <211> 302
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-F8

<400> 3222

accggtctag aattccccggg ccgacccacg cgtccgggtg tatactgatg tatgtgaagc 60
aagaaacatc agctgcaagg tactgggcaa ctgcgataag aacctggggc ccgaggcctc 120
ccgcccaggg aaacccgcc aagactacac ccgcggtgc aaccgatca ccggtgtcg 180
cggctgatca tatctctctg gtcgatgtgc gcgcaatgtc aatgtcgac gcgctgcag 240
gtaccaggcc ttagcgtgtg gtgccgctg tgtgtatata ttacacacna tgcattatac 300
at 302

<210> 3223

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-F9

<400> 3223

cgccggccat aaccggtcca gacctcccgg gtcgacccac gcgtccgcc acgctccgc 60
gttatcctcc tcgatcttaa ttacagggtca tagctaagca ggtctgacag gatgtcgtgg 120
cagacatacg tcgatgagca cctgatgtgc gagatcgagg gccaccacct gacctccgct 180
gccatagtgc gccacgacgg cgccgtttgg gccagagca ccgcattccc acagttcaag 240
acagaggaga tgaccaacat catgaaggac ttcgacgagc ccgggttcct tgccccgacc 300
ggcctcttcc tcggccccac caagtacatg gtcacccaag gcgagcccgg cgctgtcatc 360
cgcggaaga agggatctgg aggcataact gtgaagaaga cagggaagc gatggtggtc 420
ggcatctacg acgagcccat gacccccggc ca 452

<210> 3224

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G10

<400> 3224

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gtggccttgc tgagcgtggc cctagtgggc ctgctcctct gccacctcgc caccaccgcc 120
 tccgcccacc agaaagacat ccacgtcctc ggcagcgtcg acggctccag cgacggcagc 180
 agccccgagt ccgaaggccg cgtcgtctac gcggacatga agctggctga tacggaatcc 240
 gatgcgccgg cgccggcgcc ggcgccggg cgcgtcgtcg gttgaactga gaagcgtgcg 300
 tccagccaag caaggtggtc aaaaccgaga actaattaag ggctcgatcg tgtgtcaggc 360
 tactactgtt cttgccataa ttatatatag atacgcaaag tgtggccaag cctaccc 417

<210> 3225
 <211> 415
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G11

<400> 3225

ccacgcgtcc ggcgcgccac gacctctcct gttgtcgtcg ctggtcgcca tgctagcggc 60
 ggccgcccgat gtcgccaaac ccggccacgc caagcccctg acgcctggcg ggcgcgtggc 120
 acacgacaac cacggcaagt tcacggccgg gccgtggaaa ccagcccacg cgaccttcta 180
 cggcggggcg gacgggtccg gcaccacggc ggcgcgtgc ggtacaagg acacgcgcgc 240
 gcaggggtac ggcgtgcaga cgggtggcgt gagcacggtg ttgtttggcg acggcgcggc 300
 ctgcggcggg tgctacgagg tgcggtgctg ggacagcccc agcgggtgca agcccagcgc 360
 ggcggcgctg gtggtgacgg cgaccgacct gtgccaccc aaggacaagt ggtgc 415

<210> 3226
 <211> 414
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G12

<400> 3226

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 aaagctaaac cccaacaatc accatgggat tctccaagg caagacctcc aagcagacca 120
 cgaggggtcaa gaagcttctc ggactcgccc tgtcgcgcct cgccattgca cgccgtcccc 180
 gccttgctcg caggtccatc tgccgtaacg atgtcggcca gctcctctcc ctccggtacc 240

tccatcgcgc tctcctccgc gcagagcagg tcatagagga ggataacatg ctgcaggcgt 300
 tcgacatcat tgagctctgc tgcaagcgac tcgtcgagca cgcaacacat ttagacaaac 360
 cgcgggagtg cggcgaagag ataagggagg cggctgccgg gatcatgttt gcag 414

<210> 3227
 <211> 363
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G3

<400> 3227

gtaccgctca agaattccca ggtcgaccca cgcgtccacg gccctctcct ttcgtcacca 60
 tcacatccag ccagccaaca aaaatgtcgc gcgtcacagc tcggtgctc ttttacatcc 120
 tcgccgttgc tgccctcagc gcggccgagg ccccggcaga gtcaccgaag gaaggcagtg 180
 ctgccaaggc acctgaggct gccaaagaaa ctgctgcccc cgctgaagca cccggagccg 240
 cgtccaaccc cgtcgccgcc ggctggccca tcatcgtcgt ctaggaagtc tgggtccagct 300
 accgcgccag gccaaaccgg gccccccctt ttccccctta aaaaccccaa aaaaccccccc 360
 ccc 363

<210> 3228
 <211> 294
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G4

<400> 3228

aattcccagg tcgaccacag cgtccgttat tatgttgctc cagaggttct acacagatca 60
 tacagtatgg aagcagacat ttggagtata ggtgttataa catacattct gctctgtggc 120
 agtcggccat tctgggcaag gacagaatct gggatcttcc ggtccgtatt gagggctgat 180
 cccaattttg acgattcacc atggccttca gtatcggctg aggctaagga ttttgtgaag 240
 agattttctga acaaagatta ccgcaaaaga atgactgctg tccaagcact gact 294

<210> 3229
 <211> 367
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G5

<400> 3229

ccggtctagg aatccccgggc cgacccacgc gtcagcgaaa aggcgcaggc gaagccagcg 60

gggagagaaa acggggcgga tccccaccgc ctgcgcgcgc gcggcgggcg cggcggcggc 120

ggcggcaatg gaggtcacct cctccccctc gccttcgcga ccgcgcgcgc ctcctcgaa 180

gccggcgctc caactcaacc ccgcggacgt ctcctccgt cgctgcga ccccgacccc 240

aacagcggcg acaccgtca ccgcgacggc gcccccgcg cagcccgcca ccgcatccaa 300

ccccggcctt tcccaaccct tgggggcccc ccccttttt ttttgggacc ccccttttt 360

ccccccc 367

<210> 3230

<211> 69

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G6

<400> 3230

cgcgtaacc aaaacgtgca cgagaatcca gccgggagag aaaaccggcg ggatccccac 60

cacctcgtc 69

<210> 3231

<211> 295

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G7

<400> 3231

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ccagcagcca gttgctcgc cggcgcgcgc cttcttcctc gcctccgttc cgttcggttc 120

cgtcccgccc gccgcggcg ccgcattcag ggatggagat gaagaagatc gcctgcgcgc 180

tcctcgtcgc cgctcggcg gccaccgtgg cgctcgccgc ggaggctccg gctccgggccc 240

ccaccagcgg ctctccgcc gtcgcgccc cgctcggcgc cgccctcggg gccgc 295

<210> 3232
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-G9

<400> 3232

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gccgtgagga ctccggcgaa tggcgctccg cgtcgcctcg ggcctcctcc gccgcgcgc 120
cgtcgccact ctagggctac taaggagtca tacacatgtc agaaactaca gcagtcaact 180
ttcagctttg attccagcta cttctcaatg ctcaaactcg acaagaagac gctattactt 240
acctaatacca tctctgtacc aagtttggag taggtcattt gcctcagaca gcggagacaa 300
gttcgagget gttgtgccct tcatgggtga atctgtaact gatggaactc ttgctaactt 360
cttaaagaag cctggagaca ggtcgcaggc cgatgaaccc atagcgaga ttgaaac 417

<210> 3233
<211> 279
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H1

<400> 3233

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cggcatggac atcaaggac ccacggcgca gtccaagcac agcaaggcaa aggccgaagc 120
tgttatgtgc caaccagcga gcgcgttct gcccgtcatt gacgagcgt aacgcgcgc 180
gacggcgagg accgcgccga tccccggcgc gacggtggag aacaacaagt tctgcctctc 240
cgtccacttc cgctgcgtcc aggaggagaa atggcgcg 279

<210> 3234
<211> 108
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H10

<400> 3234

ttacaacacc ctatagttag tctgattaaa tgcctcgctc gcgcctcgtc ctctccctgt 60
acacgatcgt ctgcttggat gtgctctggg ggccctcgca tctcgctt 108

<210> 3235
<211> 410
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H11

<400> 3235

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ttgtgcaaga gcgtcttcag aagtcagcgc catacaaaat gatcatggag ctgagtgcaa 120
tggagctgga ggctcaagaa atatcgctcg aggagcttct ggctcgggag aaggaggaca 180
ctgccttctg gcagcgcaac gggaagatga gatcagcttc atccaagtag gacacaatgc 240
ccctgctact tgggctcact gacgatagca gaccttcaac atcggtagtg tctaggcatg 300
aaaccctttg gagcagctgc tgcctgcctg catcgaaccg tttgggtgtaa cgccgcggcc 360
ttctgtcaag atcctgcctt gattctgggc agattgagtt gtgctcgtag 410

<210> 3236
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-058-Q1-E1-H12

<400> 3236

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cctgaacatg gcgacgcttc ttgatcctac caggacttat ccttacagat acagagcagc 120
tgtactgatg gacgagggca aagaggatga ggcgatcgcg gagctgtcag gagccatagc 180
tttcaagccg gacctccagc tgctccacct ccgcgcggcg ttcttcgact ccatgggcca 240
gcgcgagagc gccctgcggg actgcgagge cgcgctctgc ctggaccgga cccacggcca 300
cacattggag ctgtacagca aagcctccac caccaatgcc gaaccccaga gctaggcagc 360
cagccagccg gccggccggc aggcgcggcg tctcctcgtc gtcgattcag ctgcggtttt 420
tg 422

<210> 3237
 <211> 367
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-058-Q1-E1-H3

 <400> 3237

taccgctcta gaattcccag gtcgacccac gcgtccaact gcgactgcct ccaagggttc 60
 caagtatgcc actccctggg tggcggcact ggttctggca tgggcacgct gtcacatctcc 120
 aagatccggg aggagtaccc agaccgcatg atgctgacct tctccgtgtt cccgtcgccc 180
 aagggtgtccg acaccgtcgt ggagccctac aacgcgacgc tgtccgtgca ccagctgggtg 240
 gagaacgccg acgagtgcac ggtccttgac aacgaggcgc tctatgatata ttgcttccgc 300
 accctcaaag ctttcaaacc ccaaaaaaaaa accccccccc cccenttttt tttttccccc 360
 acaaaaaa 367

<210> 3238
 <211> 301
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-H5

 <400> 3238

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 ggactcagcc aaccccatct tcatcgacat gaagtactgc cccaacaagt tgtgtactgc 120
 caacggcgcc tccaagggtca cgtcaagga catcaccttc aagaacatca ctggcacctc 180
 ctccaccccg gaggccatta gctgctctg cactgccaag gtcccatgca ccggcgtcac 240
 catggatgac gtcaacgtcg agtatagtgg caccaacaac aagaccaatg gctatatgca 300
 c 301

<210> 3239
 <211> 256
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-058-Q1-E1-H6

<400> 3239

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tccacaggta cgggcgctcc tgtaacggc agtcacgtgc gcgaatagca acgctcaact 120
gacagcctag agtcccatga cgaggcgcg catcgcccc atcttcatcg actgtactgg 180
ctgcggcaca tgctacgacg tgaaatgcag cgaagaagct aactgctccg gcaagccact 240
caacgtctgc atcact 256

<210> 3240

<211> 332

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-H7

<400> 3240

ccggtctaga attcccgggc cgaccacgc gtcagggaca gggtgagggc accgcctgtt 60
gacacccttg cgcacgacct gcacacctct gactgcctgc atgagctccg gcccggcgac 120
cacatcgaga ttcagtggag aaggaacaaa gaattcccat acggctgggtg gtatggagtt 180
gttgggcact tggagtcacg tgatggaagc gaacactttt gtcggtgcca tcttagtgat 240
accgtgggtgc tggagtttaa tcagtacacg ccgggctcaa ggtggaggca agcngttggt 300
gaaaaaccgg gggnaaaaaa agggggggga aa 332

<210> 3241

<211> 361

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-058-Q1-E1-H8

<400> 3241

cggtcaggcc ttcccggggc gacacacgcg tcaaaccgaa ttccctgcga ttcctctccc 60
ctcgctcct cgtctcccc taggggatcg tcggagagga atcgcaaaga gggccgtctc 120
atccgagtta aggaagccat ggagcacaag gaggctgggt gccaggcccc cgagggaacc 180
atcctctgca tcaataactg tggtttcttc ggcagcgcg cgaccatgaa catgtgctcc 240

aagtgccaca aggagatgat aacgaagcag gatcaggcca agctgggtgc ctcctctaaa 300
tcggacaggg ccaaantttc cgggntttt tgggaaaaaa aaaaaccccc cggggggggg 360
g 361

<210> 3242
<211> 395
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A10

<400> 3242

cgcgttgtct gttgcaactc cctatagtga gtcgtattaa gccgccgtcg cgctcaccaa 60
gtgaccggat cggtcggcgt tccccgtcga ctgtgtgcga tcgctggatc gggtaggcacg 120
ctgcgatgac tatctgtatg gcgagtcgct ataactacgc agacataagc tgctccgacg 180
tgtcttccgg acgcgtgggg ccgtgggcga gtgctgcgta gacgaggagg acgagctcgg 240
gctgatcggc ggcggcggca tcagcgccgg cgacgcgctg ctacggacgc ttgcgcagct 300
caagctgacc aagcgtata tcagcgacgc ggcgtgctc gcggaccatc tgccgtgcaa 360
caagctcggc cggctctact acaccaactg cgcgg 395

<210> 3243
<211> 345
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A11

<400> 3243

tgcaactccc tatagtgagt cgtattagag gacgtccctc ccgacacggg gaaccccgct 60
ccgcgcgctc gattcgtcg cgcgccatc cagggtccag ccggccgcgc gcccgcgccc 120
ccctgccggc ggccgtgcca tgccgcagcg gggctatact gcggtggtcc ccattgaggt 180
ggcgtgcgcc ggcggccgct gacgccatca gcggcgcatg agacatcgac acccgaggtc 240
aagggccgga cgtaccgctc cggatcggtg tcgctgtca ccgcgtccct cgcgggcgtt 300
aaggtcgtgc tggagtccgg tcccgtccct agcgcgcgc ttcag 345

<210> 3244
 <211> 426
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-A12

 <400> 3244

 ttccgctggcc gacccacgcg tcaagcggcg gtcgccatcg tcggccacga cggcgccgcc 60
 tggggcgaga gcacggcggt ccccgagttc aagaccgagg acatggccaa catcatgaag 120
 gacttcgacg agccagggca cctcgcgccg acaggcctgt tcctcggacc taccaagtac 180
 atgggtcatcc aaggcgagcc tggcgccgtc atccgtggca agaagggatc aggaggcatc 240
 accgtgaaga agacagggca ggcactcgtg gttggcatct acgacgagcc gatgacgcct 300
 gggcagtgca acatgggtggg ggaaaggctg ggcgactacc tgcttgaaca gggcatgtaa 360
 ctactacgta ccagctggaa tgcattgtcg cgacgatggg ttccgagtttc gacttccaat 420
 aatagt 426

<210> 3245
 <211> 405
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-A5

 <400> 3245

 attcccgccc cgacccacgc gtcaagacaa aacatggctg tgaatgtgag aaccatgtgg 60
 tcgtcgatgc gggcacaggt tgcgatgggt gtggcggttg tgttcttggt gagcggcgca 120
 tgggtcggtc ctcccaaagt ccccccaggc aagaacatca cggccaccta tggcaaggac 180
 tggctggacg ctaaagcgac atgggtatggc aagccgacgg gtgccgggtc cgacgataac 240
 ggtggcggtc gcgggtacaa ggacgtgaac aagccccctt tcaatagcat gggcgcatgc 300
 ggcaacatcc ccattctcaa ggatgggtctg ggttgtgggt cctgcttcga gatcaagtgc 360
 gataagcctg tggagtgtc cggaagccc gtggtggtgc acatc 405

<210> 3246
 <211> 286
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A6

<400> 3246

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gcacaggttg cgatggttgt ggcgttggtg ttcttggtga gcggcgcatg gtgcagtcgt 120
cgcacagtcg gtccatgcaa gaagatcacg gtcatttatg gcaaggactg gctggacgct 180
aaggcgacat ggtatggcac gcgcacgggt gcatgtocca actataaccg tgggggcccgc 240
agatacaatg acgtgaagag gcccttcttc tttaacatgg gcgcat 286

<210> 3247

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A7

<400> 3247

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ccgccgccgc aacctcgaag gaggaggagg aggtggagtc gcccaagaaa ggagcggctc 120
tgtcgccggt gccggaggct atcgatcatg ccacagccgc aacctcgaag gaggaggagg 180
aggaggtgga gtcgcccaag aaagaagcgg ctctgtcgcc ggccgccgag cctatcgtca 240
tcgccgccgc cttaacctcg aaggacgatg aggaggtgga atcgcccaag aaagaagcgg 300
ctctgtcgcc ggccgccgag ccggaggcca tcgttgccgt agcagcagtg gaagacgtgg 360
tgg 363

<210> 3248

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-A8

<400> 3248

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gagcaacacc aagcgcgtga tcttgatct caagcccggc gctcaattcc gcgagaatct 120
gttctgaac atcaggaagc cgttcacac gttccggtcg ggcccccaaga agcccgcgtt 180

cgtggtctgg aacgacactg caggcacaag cggcatcgac ggcaagccgg tgggcacggt 240
 ggggagcgcc acgctggcgg tggagtcgga ctacttcacg gcgtacggcg tgggtgtccg 300
 gaacgacgcg ccgctggaca agcccggcgc caagggcgga caggcgggtg ccgtgcggct 360
 gttcggggacc atgacgcata tctacaactg caccatcga 399

<210> 3249
 <211> 411
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-E11
 <400> 3249

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 cacccegcct tcacgcctcc ctcaccaaatt aagggtccgc ccttttccga cattcacaag 120
 ggggacanga aatcagcggc catggcctcg attccggcga cgaccttcgc cgatcatctta 180
 tccgtctctt tctgtgccgc ngctggcacc gccgtcgaca acgacctccc cgactacgtc 240
 atccaaggcc gcgtctattg cgacacctgc cgcgcgggt tcgtgaccaa tgtcaccgag 300
 tacatcgagg gcgccaaggt gaggtgggag tgcaagcact tcggcaccgg caagctcgag 360
 cgctccatcg acggngtgac cgacgggaac ggcacgtaca cgatcgagct c 411

<210> 3250
 <211> 430
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-E2
 <400> 3250

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 agcttcagga acgtggagta cgtgggagag gcgaatcagc tccggtcggc gacgtactg 120
 gtcgtccccg aaaaacttgc caagcctctg gcgtcgctgc ccgccgataa ggtgcggccg 180
 gcgggtggaga accacgtcct tctcagttac ttcgaccca tcaagctgga cgagatgaag 240
 acacgcaccg ccacctctcc cagctgtctc tccgtcaccg acaagaaact cggcgtctc 300

aactacacca gggccgacga cgggcagatg tacttcggcg ctcccggagc cccctgcggtg 360
 gccaaagctcg tcaaggctcg cgcagcgcgg ccgtactctg tgtccatcat ggagatcagg 420
 gagcccatatt 430

<210> 3251
 <211> 399
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E3

<400> 3251

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 tcggcagaag cctcgtgcag acgatgccaa ggtgccgctg gggcttcttc cacgtgggtca 120
 acagcgacta cacgactgg ctcatgtacg ccatcagcgg cagcaatgcc cccaccatca 180
 tcagccatgg caatcgctac atcgcgccgc ccaaccttgc cgcgacgcag gtcataaagc 240
 agcatgacac gccggagtcg gtgtggaaga actgggtgtg gcactccgag aacgacctcc 300
 tcatggaatg cgcccaactt aacgtcaacg ggccgcaaaa tcaacaggaa tttcaaacact 360
 acggacctca tcatgccaag gaacggttcc aacttcaca 399

<210> 3252
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E5

<400> 3252

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 gcgattgggt ggccgacccg caggcgcaca cggcgtgga cgacatcctc ccgtgcgtgg 120
 acgtggccac ggccaacgag tcgctgtacc ggagccagga ggtgacgtcg cagctgggtg 180
 cgctggtgaa caacgtcgtc gtcaacatct ctaaccggaa cttcccgccg gggctccgcc 240
 cgctctactt caaccagtcg gggccgctca tgcccggtct ctgcaaccgg ttcaaccgg 300
 acatgagccc ccgccggtgc ggcgccggcg aggtcgactt cggcagcgcg gcgcgggagt 360
 ggaagcgggt cgagtgccag accacggggc cgccggggtc ggagctgtgc gccacgccgg 420

ggcg

424

<210> 3253

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E6

<400> 3253

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ctcctcgggc gccctggcct cctcgtcgtc gtctctgctg caccagtcgt ctccgtctga 120
gagtgagact gagaccgaca gtagcagcgg agaattctct tcgtcgtcgt cgtcggaaga 180
ggccggcgag aaggagaagg agaaggagca ggagatggag aaggcggtcg cggcggagaa 240
ggctgcccag caggagctgc tcaagtacgc caaggagaat ggcatcgtgt caccgaccaa 300
cggcacgggg tggataaatg gcatcgcccg ggagttcgtg gacgcccaca acgagctccg 360
cgcgcgctac ggcgtgccgc ccatgaagtg ggacaggaag ctggctcg 408

<210> 3254

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-E7

<400> 3254

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gcggccatgg cctcgattcc ggcgacgacc ttcgccgtca tcttatccgt cctcttctgt 120
gccgaggctg gcaccgccgt cgacaacgac ctccccgact acgtcatcca gggccgcgtc 180
tattgcgaca cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc 240
aaggtgaggc tggagtgcaa gcacttcggc accggcaagc tcgagcgctc catcgacggg 300
gtgaccgacg ggaacggcac gtacacgac gagctcaagg acagccacga ggaggacatc 360
tgcgaggtgg tcttggtgga gagcccgcgc aaggactgcg accaggtgca ggcggaacag 420
gaccgcg 427

<210> 3255

<211> 405
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-F1

 <400> 3255

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 ggatgaaggc aaagaaagcc aagagcaggc ggaccacagc ccgaaaacag tcctcgaaga 120
 acatttcttc ggaaggaggc caccgcccc a tgatggatgg cttcgaggag taaaccgcgt 180
 tctcacaagc atagtaagtt gtatttgc at tcttaaaatg ttagttgttg atggcagctg 240
 cacgccagag gcagattgat tgatgttctg cctggagcac cccctccctt ggcggtggcaa 300
 tgaatcggag tcgaatctcc ttgagaacgt acaggatggc ttatacccac cccactaatc 360
 tgttattcag ccagcgctat ttttttttgc cccctccgt gtttc 405

<210> 3256
 <211> 455
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-043-Q1-E1-F10

 <400> 3256

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 accactccct ccccggggac gccttcgacg ccgtgggtgcg cgccaagctg gccctggagc 120
 tggagtgcc cgggggtgtg tcctgcgcgc acatcctcgc actggcgctc ggcggtgctga 180
 ttaccatgac cggcgggccc cggtagcccg ttccgctggg gcgcagggac tcgctgtcgt 240
 cgtcgccac ggcgcccgc gtggagctgc cgcacgcca cttcacctg gaccgcctca 300
 tccagatgtt cggcgccaag ggggttcacg tgcaggagct ggtggcgctg tccggcgccc 360
 acacgctggg cttctccac tgcaaggagt tcgcccacg cctctacaac ttccgcaacc 420
 agggcgggaa gccggagcag ttcgaccca gcatg 455

<210> 3257
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F11

<400> 3257

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cgcaacctgg cggggttaca caaccaaaaa gggaacaacc cccaactggt ggtccggctc 120
aaggggttgc agccaaatth ttgtaaaaac attgacgggc aaaactataa ccttgagggt 180
ggagacctct gacaccattg acaatgtgaa ggccaagatc caggacaagg agggcattcc 240
cccagaccag cagcgtctga tctttgcggg caagcagctg gaggatggcc gcactctcgc 300
ggactacaac atccagaagg agagcacctt tcaccttggt ctccgcctca aggggtggtat 360
gcagatcttt gtgaagaccc tgactggaaa aaccataacc ct 402

<210> 3258

<211> 263

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F12

<400> 3258

gggtcgacgc acgcgtccga ccacgagtc gcagcaatgg cggccaaggt gttcctcctc 60
ctccgactaa gcaatggtcg ccgtcgctcg ggctgcaacc gcaacagtac cgctcgcgga 120
ggaagccgat ccgcgggcac tgccggaaca ttggaccacc gcaaaaaatt acaaggccac 180
aatggacgcc aaaacccgga aggctttcaa cggcttggtg gccgccgcta cggaaaaaaa 240
ccggtccaag gcgttgaagg cct 263

<210> 3259

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F2

<400> 3259

gtccaccac ccgtccggtt cgccagcccg cccgccctc ccctctctct gtctcgccgc 60
ccggggagaa cgagggtcc gccgctcccg gggaagagcg cgccattgcc gccgccgcgc 120
tgactgggga atatggttgt ccaagagttc agaattgatc tcaagaagcc ccttgttttc 180

cagcttggac atcttgatga atcgtaccac gacatggggtt caccaatcga ttatcagcaa 240
 gggagggtcca tgcttttttcg gaaatgatgt cctgcagttc atgactcgca cgaagtggta 300
 ggctgtgccca actatatggc tgactgttgt ctgctgcctg gccgtgaaat ctattctgat 360
 gggtcatact gttcaggacg taactatgat ggctctgttt gggatattta ttttgacgct 420
 gatcgaatac a 431

<210> 3260
 <211> 421
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-F3

<400> 3260
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 gcaggcactt cggcaccggc aagctcgagc gcgccatcga cggggtcacc gacgcgaccg 120
 gcacctacac gatcgagctc aaggacagcc acgaggagga catctgccan gtgggtgctgg 180
 tggccagccc gcgcaaggac tgcgacgagg tccaggcgct cagggaccgc gccggcgctcc 240
 tgctcaccag gaacgtcggc atctccgaca gcctgcgccc cgccaacccg ctcggctact 300
 tcaaggacgt gccgtcccc gtctgcgccc cgctgctcaa gcagctggac tcggacgacg 360
 acgacgacca gtaaactgta ccacggcggc gtcgcgga ggtgcacaa aactataacg 420
 a 421

<210> 3261
 <211> 371
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F4

<400> 3261
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 acggagagct cgagggtgtg gcgcacggag gccgggtac gcgtgggctg gggcgtggtc 120
 tcggcgcggc acatcgggca gctgggtgctc ccgcgcagcc acgtgtcgat gcagtcggcg 180
 tggaagtagt gcatgcactc ggggagcacc cgcacgacct cgccgtcgtc gaagtcgggc 240

aggcacaccg ggcacgtcga ctggttccag gcctcctcct tgcggtaccg gcacaccacc 300
 gccgcgcccc ccaggacgac gcatgcatgg cgcggcgcgc tagatgtggc ccgcgaogat 360
 ggtggcgggc t 371

<210> 3262
 <211> 400
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-F6
 <400> 3262

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 cggcccaaaa tcgcctcatc gaccacgccc ccttccaggc tcccgtctcc atgggtctcc 120
 tctcaaacag gattgggagg gagagcctca aggcggggga tcatatctac tcttgaggagg 180
 cggcgtgggt ctacgcgcac cacggaatat atgtgggcga tgataaggtg atccatttca 240
 caagaggaag aggacaggag gtccggaacag gaactgtcgt cgatattatt cttgtgagtt 300
 ccaccccaaa acgaagcaac acgccttgcc cgggtgtgcac cgacgaaacc agcgacagca 360
 gcacagagac gaacggcgtg gtatcctcct gcctcagctg 400

<210> 3263
 <211> 397
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-F7
 <400> 3263

ccacgcgtcc gacaagcttc tcgaggtgat tgatgctagt gagttgccag aaatttttgg 60
 tggaacctgc cgatgtgaag gtggttgcat gaaggctgac aaaggccctt ggaaggaccc 120
 cgaaatcatg aagatggttc aaagtgggtga tgggaggtgt ggatcactcg gtacggcctc 180
 tttcgaggct ccggagaaaa tgatttgtga agacgacacg tatcctaaga aacaagcttt 240
 gtttgatggg gaaacacaat tagctggaga cgagcattct cagtcacaga aaatttcccg 300
 tggccggatt gaacatcctc acgtgtcacc tcttcacgag gaacttatcc ccaattcaat 360
 tcatacccct ggatcaccct attcttgtga tgtcccc 397

<210> 3264
<211> 400
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F8

<400> 3264

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ctggcggatg gcgtagatct gcgacgtctt cccgccgcct cggacgcgga tcctcatgtc 180
gatgtccttg aacctggagc gcccgcgcag caggatgggc tcgaaggcct tgaggcggag 240
catctccggc ctgatgagct caatcgggac gccgttcacc ttgatcagcc cgcgccccgg 300
cttgggtgtag gcgacggcca cagccgtctt cttgcggccg aagcactgga ccgtgccggg 360
ggtcggggcg tggaacacgg tagacatgtt tgcgaccttg 400

<210> 3265
<211> 172
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-F9

<400> 3265

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acttgtaaat ttgtaatcga ggaagaaaag cacctctcga tcgattaaca tgtctagctg 120
ctacgatcct gtgattcgac gatgttaatt aatcggcagc ttccattaaa aa 172

<210> 3266
<211> 420
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-043-Q1-E1-G1

<400> 3266

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tggagctcac aggcgccgctg ctccggcgat acgcgctgcc gtcggcgctcc ccggtggccg 120
cgaggggtggg gaggaggagg cgaccagcca ggggtggcctg cgtcgggggc ggggggttcg 180
cggaggaggg gcacctcagg tactacgagg cggccccgcg gaggaaggcg gtggaggcgg 240
tggcgaggga cctgggaaag ctccgggcca tggggctcgt cgcgggggac gcagccaagg 300
agaaggtcct ctcggaagcc acggatcttc tgctgcanga gctgagccag atgaaggatg 360
cggaatacaa gataaacaag atggagaaag aacagaatgc tgctatgaaa gcactgaaga 420

<210> 3267

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G12

<400> 3267

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ccgtcacgcc tgcgccgtgc cgtcgggggg ctccacccca cgacgcccct ccgtggccac 180
gccgcgccac ccacctcct cgctgtcccc cgcggcgctc tccggaggag ggtactaccc 240
gcctctgcgg tgcagcatcg accaccgcc caccgcgtcc gaagcagacg cgctcgagac 300
accgcgcgac cagctcaacc acctcgccca ccgcgtccac ctctcgagc gcggcgcgac 360
cccgatggcc gccaccaaca ccacgcccat catcgtgtc gcgccggggg ctgccttccc 420
gcaccatgca cgtgccta 438

<210> 3268

<211> 227

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G3

<400> 3268

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaacaaaaa gatcaaaaaa aaaaataaaa 120
aaaaaaaaaa aaaaaaaaga aaagggaggc cgcccaaaag gttcaaagct tagttacccg 180

tgaatgcaac ttcaaaactc ttcaaaagtg tcacctaaat taaatta 227

<210> 3269

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G5

<400> 3269

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caccggcgggc cttggcgggca agatctacgt ggtgaccgac cccaccgacc tcgacgtggt 120

gaacccgcgc cccggcacgc tgcgctgggg cgatcatccag cccggcccgc tgtggatcat 180

cttcgcgcgg tccatgatca tccagctctc gcaggagctg ctcatgagca gcgacaagac 240

catcgacggg cgcgggcggc aggtgcacat cgccaacggc gccgggatca cgggtgcagct 300

ggcgcaaaac gtcatcatcc acaacctgca cgtgcacgac gtcaagcaca ccatgggcgg 360

cctcatgcgc gactccccca cgcacatcgg ctccccg 397

<210> 3270

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G6

<400> 3270

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cgcccgtgac agcgtgcac gccacggacg cccgcgggga ggtgcggctg gtgtggtgcc 120

agagccccgc gccgcggttc cacggcgcca gcgtggaggc cgcggtgcgc ggcgcgcggg 180

agctccgcct gctccggcac gccgagacgt acgttatcgg gtgccccggc ctgctgatcc 240

gcctcttccc gtcgcccgcc tgcgaattgt ccggggacgt tcgcctcctc tgcgcggaat 300

ccgggctcca aggccaaactc aactactggc ggacccggcg gttcttcctc cgcttccggc 360

gctgcgacgc ccgctgcgtc aggggcagga tcttccgct 399

<210> 3271

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G7

<400> 3271

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gccgcgggtga gccaaagccgg cgcacgtcgc cccgggggtc acgctcacca ccgagccgca 120

accaattaat aatatatata tatagctagg atcgatcgtc agtaaaatgg caggctccgc 180

cgctctgagg agccccctgt ccgtcctcct ctacatcctc gccgccgtgc ccgccaccgc 240

cgcgggcgacg ccgaccgacg ccgccatcga cgaggcgtac gcgcatctcg tcaacctcat 300

cgctaaccag gagtactggg cggagcgcgc ggatgcggcg caccgcgtaca accgcgcggc 360

gttacagacc gaccctggc cgctcgtgc 388

<210> 3272

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-G8

<400> 3272

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tcttcgact cagcatggtc gccgtcgtcc tggctgcat gccacagta gcgctcgcgg 120

aggaagccga tccgcgggca ctgccggcac agtggaccac cgcgaagaag tacaaggcca 180

cgatggacgc caagacgcgg caggctttcg acggcgtggc ggccgccgct acggcagaga 240

agcgggtccca ggcggtggag gccgtgctgc agcagcagct gaacatggac gtgtccctgt 300

ccaaggcgac gtcttccggg gacgagaaca actacgtgag cgtggccgcc gcctacgaga 360

aggccgcggg cgccgtcatc gcggcgacgc cggacaacaa gctccgcgc 409

<210> 3273

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H1

<400> 3273

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cacgtcgccg ttcctttttg ccttggtggc gtcggcggcg accctgctca gcgtcggcga 120
cgcgttggtc gtcgacggcc tgcaggtggg gttctatggc aagacgtgcc cggcggccga 180
aggcgatcatc agcgacatcg tcaacaacga aatcgctatg gaccggggca tctcccctgg 240
cctcatcgcc ctcttctttc acgactgctt catcacgggt tgcgacgctt ccattctcct 300
ggacgagtcg cccgccggcg acgtcccaga gaaggagtcg tccgccaacg gcttcaccct 360
ggtcgggctc agaaccatcg ac 382

<210> 3274
<211> 244
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H10

<400> 3274

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tgacctcttc ccccttcgga ccacctccaa ggctcttggt gtagcttggc actctcagca 120
atcaagtttt catgtctgat ctgcacattc agatcccaac tgccgtcgat cccttcgctg 180
aggccaatgc tggggactct ggtgtcgcat cagggtcaaa cgactacgtt cagggtgagca 240
tcca 244

<210> 3275
<211> 357
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H3

<400> 3275

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atgctgatcc tcccaccgg cgacctgctg ctgctgagcg gcgccgcaa gggctgctcc 120
ggctggggct tcgggcggca gccggtgctg accccggtcc tgtactcgcc gcggaaggcg 180
caaggcccgc ggttcggggc gctggcgctg tcgaccatcg cgcgcagtga ccaactccacc 240
agcgccgtgc tgcccagcg cacggtgctg gtggccggcg gcaacacgaa cgcggcgtag 300

aacttcagcg gcgtggactt cccacccgag gtgcgcgtgg agcggttctc cccgccg 357

<210> 3276

<211> 295

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H5

<400> 3276

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aagaagctga gaggttgga ccacgtacac cgagcgaagg gtgaatctag gttcatggac 120

tgtggatgtg ttgttgcttt gaattgcgct gtcgtgttta cctactcoga gtccgacaac 180

agcctcgacg ccgagtgcct tttcgtttca acgatgtgct atatcttggg gccacggaac 240

ggcagatcct agctttcttt gtaaacaaga ggatgtggaa agttggctgc gtaaa 295

<210> 3277

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H6

<400> 3277

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cgatgcacgg aggaggatgc cgccgtagct gcggagattg ataataataa gcgggcgagg 120

accgccggcc cctctggcct cgctgctcct ccccccttc tccccccaca tgcgctgccc 180

ccgcccggcc ctgccctgcc ctgctgcgcc caaccagctg aatctccgca cagacaatta 240

gagtagctgc attggcgggg aaagcgcaag aagctcagca gaaatggcgg agcaggcagg 300

cgccggaagg tactggtgcc acatgtgcgc cgcggtcgtg agccccgc 348

<210> 3278

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-043-Q1-E1-H7

<400> 3278

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 cgggtcgggtg gagatattct tctcgcgga caacgcgttc ctggcgctgc ggaggctcat 120
 gttcttgtag cggttgacct acctcaatgt cgcatctac cctttcacct ccatcttctt 180
 gctggtctac tgettcaccc cggcgctgtc cctcttctcg ggcttcttca tctgtagac 240
 gctcaatgtc gccttctctt gctacttgct gactatcacc gtcaccctca tgcgctcgg 300
 cgtgctcag gtcaagtgg cggcatcga gctcgaggac tggtagcgca acgagcagtt 360
 ctggctcatc tcgggaacaa gcgcgcacct gtacgcgggtg gtgcaaggtc tgctc 415

<210> 3279
 <211> 352
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-043-Q1-E1-H8
 <400> 3279

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 ctctctctgg tctctccacc gccgcgggtc gccccgcgt gccgccagtc ggccaccgcc 180
 tcatcgggg gcctcatgag ctccctcgcc gtcttctccg caccgggggc tcgggtagcg 240
 gcggcggggc gcgagcagaa gtggggccac gtggaggggt atgaagacgg tggagaggac 300
 ggctacggg aggcgctcca cagacgcgg gagctcgtgg agtgcgccat gt 352

<210> 3280
 <211> 403
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-043-Q1-E1-H9
 <400> 3280

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 acaagtgcag attcaccaaa atccgagcct agtgccccac cactttctga gaccgaagaa 120
 gtagacaaca tggcaatcga tgaggtcagt ggtgatgctg cagagggcgc ggaagagctt 180
 gaccctgcgc tcgaggagac gccgatggag gagacgatcc gtgtgacgcg cgccaagcta 240

aggagggcgca ccgccaccga ggattctgct gggaattagc tgcattgccgt tgttttccct 300
gcacattgta ttgatctttt tccgagtttt aggtcacat gttgtttgct ggaatggaga 360
tatgttggtt ttcacttggg tcttgtgaca cagagttaat taa 403

<210> 3281
<211> 385
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A10

<400> 3281

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gccgcgccga ctgggcgact gaccggaacc ggctggcgca gtgcgcgcgc gggttcggtc 180
acaggaccgt ctgcggcgcg gccggcaagc tgtacgtcgt gagggaccgc agcgacgacg 240
agatgatcat cccgcggaag ggcaactctgc ggcacgccgt gatccatgac tggccgctgt 300
ggatcgtgta cgcgcgctat atggtgatcg agctgcggca tgagctgatt ctgaatcaca 360
acacgacgat cgacgggccc ggccgc 385

<210> 3282
<211> 408
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A11

<400> 3282

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gttcaagaaa aataccagct taccaacaac agcagcagca agcccacccg ttcgacgaca 120
tgccccgcct cgcgcgccgc gccgtgttgg cgctcctagt ggcggtcgcg gcggtggccg 180
cgttcctcgc ggtgccggcc tcggcggaagt ccggggagct gagcgcgatg gggttgctgg 240
cggcgaaagg cgcgagcggc gcggggccgc agaagtgtc ggcgcgggtg ggcgagtgcg 300
acgtggacga ggcggaggag ctccgggctga gcggcgccgc cctcggtcc gacgacgcgg 360
tgccggcgac gctggcgag cggaagccga ccaaccggt catcagct 408

<210> 3283
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A12

<400> 3283

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taagcagggtc tgacaggatg tcgtggcaga catacgtcga tgagcacctc atgtgcgaga 120
tcgaggggcca ccacctgacc tccgctgcca tagtcggcca cgacggcgcc gtttggggccc 180
agagcaccgc attcccacag ttcaagacag aggagatgac caacatcatg aaggacttcg 240
acgagcccgg gttcctggcc ccgaccggcc tcttcctcgg cccaccaag tacatgggtca 300
tccaaggcga gcccggcgt gtcateccgc ggaagaagg atctggaggc ataactgtga 360
agaagacagg gcaagcgatg gtggtcggca tctacgacga gcccatgacc ccc 413
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<210> 3284
 <211> 436
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-044-Q1-E1-A2

<400> 3284

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ggccgctgtc aggaatcttc aaccgcttca acgatttggg ggtgctcggg ggtcgggaag 180
cttctctggc tcacctctca catgtgtgtg gccttattgg acaaagatag ccttcggagc 240
tcgaccaatt gctcatcggg gcaatggctc caccgcgggc gggaccactg ctgcagaccc 300
atttcactcc cttgccatca ccgcgtgagg tcacgagtca cctgaagatc atcctgggtac 360
ctggaatctc aagtencagg tcaagaacag gtaccacagg atgaggcgca tggaggatgc 420
tgcgatatgt tcgtga 436
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<210> 3285

<211> 443
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A4

<400> 3285

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tggtcttggt gttggtgcdc ctatactcga acgccaatgg cagcaccaag gggtgcctca 120
aggagcttgc atgcttctag accctccgtc gactgaccca tctctctagt tataatTTTT 180
ctctcgctct tgcattgccc attacatgct atccattggg aacgcacaac agtaaaacga 240
cagacatccg acagctatac tatgttcgac ggtgtaacac cctgaatttg agggataaaa 300
atttcttctc taaataccat ccacattcac gtgttacctc ttgtctctct ctctctctct 360
tttccttttg attaacagta agtgaattat gcgacgggtt aattatttat tttgtcaaaa 420
cttatgtgac tcatgatacg ttg 443
  
```

<210> 3286
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A5

<400> 3286

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accacgcgt ccaactatggc atgacgctca tgctcatggg cctctgttcc gtcgcgtcgg 60
ggctctcggt cggccacacc ccggcgcccg tcatggcgac gctgtgcttc ttccgcttct 120
ggctcggggt cggcatcggc ggcgactacc cgctgtcggc gaccatcatg tccgagtacg 180
ccaacaagaa gacgcgcggc gcgttcatcg ccgcggtggt cgcgatgcag ggcttcggca 240
tcatggccgg cggcctcgtg gccatcgtcg tgtcccgctc gttcaaggcc aggttcccag 300
ccccggccta cgcgctcgac cccgccgggt caacgccgcc gcaggccgac ttcgtgtggc 360
ggatcatcct gatgctgggc gcaatgcccc cggcgctcac ctactactgg cgcaccaaga 420
tgcccgagac ggcgcg 436
  
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<210> 3287
 <211> 418
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A6

<400> 3287

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gctgggagac aagccacgt actccacgtt cctgaagctc ctgcaggaca ccaaggtcgc 180

gggcgaggcg aatcagctcc ggtcggcgac gctactggtc gtccccgaca aacttgccaa 240

gcctctggcg tcgctgctcg ccgataacgt gcggccggcg gtggagaacc acgtccttct 300

cagttacttc gaccccatca agctggacga gatgaagaca cgcaccgcca tcctctccac 360

gctgctctcc gtcaccgaca agaaactcgg cgtcctcaac tacaccaggg ccgacgac 418

<210> 3288

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A7

<400> 3288

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gggttagggc ggaggtgtac ccgctgttcg cgacgacagg ggtggcggtg gggatctgcg 120

tgatgcagct ggtgcgcaac atcaccacca acccgaggt gcgggtgacc aaggagaagc 180

gggccgcccgg ggttctggac aaccacgacg aagggccgcg ctactcccaa caacgggttc 240

cccaggtccg ggtcctcaaa ccgcggaac tacttccagg caatggccaa ggtgccaaac 300

gccctatta ttagacgac gacgatatac cccaatgcat ggcaagaata tatatatatc 360

agcacaacgc aactgcatgc gatgctgctt gttgctgcaa ttaatccact atactatata 420

ctatgggagt attattg 437

<210> 3289

<211> 225

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A8

<400> 3289

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tcttcggtag ctgccagtca accttcact ggacctacat tatcgcaagg cctgatcgga 120

cgactgcgat acgccgctcc atcaccgctc aagtacctca ggatgaggaa agcagcggat 180

tcgtcttctc tcaagggcat cgtgtacggc agtccgggat gtgta 225

<210> 3290

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-A9

<400> 3290

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cgcatggtgg ccttcacgta cctgcgcatg gggcccgacc tgttccagcc cgacaactgg 120

cgccgcttcg ccgcgttcgt caagcgcgat acggagccgg gcgcgcggga ggcggtgccg 180

gagcaggtgg agcgggagggc cgagggcgtc gcgcacgcca cccagcccct cgtgcacgag 240

gccgccgtcg cgctcaccaa ctgaccggac cggccggcgt tccccgtcga ctgtgttcga 300

tcgctagacg ggggtggcacg ctgcgacgac tacctgtatg gcgagtcctt atacttactc 360

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-B10

<400> 3291

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caagccggcg cacgtcgccc cggggctcac gtcaccacc gagccccaac caattaataa 180

tatatatata tagctaggat cgatcgtcag taaaatggca ggctccgccg tcctgaggag 240

ccccctgtcc gtccctctct acatcctcgc cgccgtgccc gccaccgccg cggcgacgcc 300

gaccgacgcc gccatcgacg aggcgtacgc gcatctcgtc aacctcaccg ctaaccagga 360
gtactgggcg gagcgcgcg aggcggcgca cgcgtacaac cgcg 404

<210> 3292
<211> 361
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-B11

<400> 3292

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gctccagctg cggacgtccg atgccgcggg gcagcccgcc tcgcattcgc cggcaatggt 120
ggtgtcgtct ggcggtccca atcccaagtg cgtggccggc gccagtaacg accacgcgtg 180
ccgcgtcggg ccagtgcacg atccagtga ccatgaggag gagggctcta gctcaatat 240
ctacgcgccc accgccgcgc ccgactacgt ctgacacgac gacggcagcg actacaaaga 300
tgccgacgtg occaacaacg atcatctcgt catcgtcagt cattgaaagc tgtcgcgcg 360
g 361

<210> 3293
<211> 405
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-B12

<400> 3293

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gcaaaaacca ccatccgtcg tcgccaaccg tagcaaggag ccaaggacat caccaccgcc 120
cagcaataat ggcgagagc atgaggattg tggcgctggc cttggtggcc ctgctggtgg 180
tggcgggcggc ggcgcccggt gccaccgcgt acggtgcta cgacgactgc tacgagcgt 240
gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca 300
cggaccaggg cgccggtgcc gccggcgccg cgccggcttg atcgcccagc gcattcatcg 360
cttcagctcg atataatcg tgctccgtca gcaaccaca tatga 405

<210> 3294

<211> 415
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B3

 <400> 3294

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 ggtgtcatgc gccacgctgt catggctcta acaggacgag ctcaactacc cgtccatcag 120
 ggtcatcctc agataaccgc ccttcaccgc gacggcgaag cgcgccgtca caatcgtcgg 180
 cacggccagc tcgacgtaca ccgtcgccgt gaacgtgccg gcgtcagtca cagtggaggt 240
 gatcccgccg aaactgactt tcaaggcgt ggaagaagtc ctgaaatact cagtcacaag 300
 caagtcggcc aatggccaga cgcttatcgg ccctgtcgag ggggagctca aatggttgtc 360
 cggcaagtaa ttctgcgga acacgatcct cgtcagtaac gaatccagga cctcg 415

<210> 3295
 <211> 397
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B5

 <400> 3295

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 cgacctcaag gcgtccaaca tcctccttga cagggacttc aacgccaaagc tctccgactt 120
 cgggctcgcc aagctggggc ccatgggcga ccagagccac gtcagcacca gggtcatggg 180
 cacgtacggc tactgcgccc ccgagtacgc catgaccggc aagctcacca agatgtcggg 240
 catctacagc ttcagcgtcg tgctgctcga gtcatacacc ggccgcccgg ccatcgacgt 300
 cacgatgccg tccgaggagc aggtcctcgt tcagtgggca acgcctctgc tgagagacac 360
 gcggatgttc atgaagctgg ccgaaccgtt gctgggc 397

<210> 3296
 <211> 433
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-044-Q1-E1-B6

<400> 3296

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ggcgcagagc atgacgattg tggcgctggc cttggtggcc ctgctggtgg tggcggcggc 180

ggcgcccgtg gccaccgctg acggctgcta cgacgactgc tacgagcgtg gcgccaacgg 240

caagaaagac cccgcctgca ccaagatgtg caaccaggcg tgcggctcca cggaccaggg 300

cgccggtgcc gccggcgccg cgccggcttg atcgcccagc gcattcatcg cttcagctcg 360

atataatcgc tgctccgtca gcaaccaca tatgattcga tcaatcttcc tcctctaatt 420

tctcgactcc gtc 433

<210> 3297

<211> 433

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-B7

<400> 3297

ccacgcgtcc gtcttgccct tgtacaacgc acgcacggtc cccgtcccaa tggcccagac 60

tctgtccgcc gcttcggagc tggccaccct gaagcgcccg ttccggcaacg acgggttcgg 120

cgatggcagc aacaacggca gcgcgaccgg cgagaagccc aaggcgcggc ggcgggagggc 180

ggacccggcg gcggcgatgg ccgcggcgcg gcacgagttc ggcgagcacg gcggcggtgaa 240

catgtccatc gaggcgtcgg cgacgttcac ggtgatggag ccggacacga tgcggcggtc 300

gttcgcgggc gagctgggcc ccgaccgagg agacatgtac atctacagcc ggcacttcaa 360

cccgaagggtg ctggcgctgg ggcggcagat ggcggcgctg gagggcacgg aggcnggcta 420

ctgcacggcg tcc 433

<210> 3298

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-B8

<400> 3298

ccacgcgtcc ggcggtattgc attggagatc agacttagtc gccatctcct atggatgtgt 60
tctctggctt caatatttca tatgttgact gtgggttgac gatcgtctcc atcactctag 120
ccacatttgg gtggcatgga ctctcatcgt gaagaatcat caagtccatt tgacatagga 180
tttgcacccg acgttgacgc caatgacatg ttcattgggtc tgacatcact gcagcataca 240
ttactacatc atcacattct caacatttat tctgggagct taacacagac atggatttct 300
cacaattcca gaactgtcat atattccttc tgagcatcaa agctgtttat cctacgtcgc 360
acgacaggac tctcagatgt tgcgttcaat acatcaacga gcttttacag ctacgaatcc 420
a 421

<210> 3299
<211> 401
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-044-Q1-E1-C1
<400> 3299

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cctgcgggtg aaggccaaga agaacgtggt ggagatgccc ggcaatggcg acgtgcccta 120
cacgcacgca aacatcagcc tggcccggga gcagctcggc tacaagcca cgacgagcct 180
ggagatgggg ttgaagaagt tcgtcagggt gtacctctcc tactacggat acaaccgtgg 240
gacgcatacc ttccggaact catgatgtcg ctctgtgcctt ccactctcgt ctgggtccac 300
acaagtgtg ggggaaattg tgttgactgg ctgttgtagt tgggttagga cagaagagga 360
ggggacggcg acagaacgat caaacggagg gccggctttt t 401

<210> 3300
<211> 381
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-036-Q1-E1-H7
<400> 3300

gacgcgtagg acattacaac accctatagt gagtcgtatt atatctttcg ttggtagaag 60
caaacatcaa tgaattgttc acgcccacta gaaaaaagg tttgcgtgtg atggaagcga 120

tctggtgctt gcgtatgcca gcaagctgcg attctgagtg taacacataa cgatgttctt 180
 tcattcttct tttttgttcc cttgttgcac caaattgtgc ctaaaccacg tcgatgtgct 240
 gccatattgt caatccctga aacggtcaat catggatgga ccgaatgcaa tacaaatata 300
 ttatactaca caataacgct acctttgcta aaatactgga ctcactccta acaaataaat 360
 ggcggccgct ctataggatc c 381

<210> 3301

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-036-Q1-E1-H8

<400> 3301

gggtcgaccc acgcgtccgc tccactccac cttcccga aaagcttacc tttgtgtttg 60
 tgtgtctgtc tggcaatcga tcgatctcca tgacgacgtc cccgccgcgc gcacgcctgc 120
 tcgccatggc gctggcgctg gcattcgctt gcgtgctgct cgtcaggtec gcggacgccg 180
 ccacgcccgg cggtcccgcg tacgggtgca acccggccac ggacaggacg tgcaggccccg 240
 agggcgctcg ggtgggtgct cccgacggcg gcattgacct cgacggcgac ggcgacgagg 300
 acgagctgcc gcagttcgac ccacacttca cgatcctcgg ccatgcccag tgagtgtgag 360
 tgcaggtgca gctggctggt tggatcatct agtcgggtgta ctggacatgc gtcgtaatct 420
 ctgtcgttca ttcgacgcga gaggaattga g 451

<210> 3302

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A1

<400> 3302

ccacgcgtcc gcggacgcgt gggcgacgc gtggggcgac gcgtgggacg agccgctgca 60
 cgcttaataa cattgtagat tggtagcgga ggtcgaggaa atggaataag acggctattc 120
 caatccta atcgggacaaag tttgatgact ttgctcagct tcctcttgag atgcaatggg 180
 ccatcgtaa ccaggccaga gcatacgcaa gagcgatgaa ggcgaccctc ttcttctcga 240

gcgcgacgca caacatcaac gtgaacaaga tcttcaagtt catcacggcc aagctcttca 300
acctcccgtg gacggtggag cgcaacctca ccatcggcga gcccatcata gacttctgac 360
gacgcccctcc tctaactagt aactcggcag cacacgcacg ac 402

<210> 3303
<211> 424
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-037-Q1-E1-A10
<400> 3303

cacgcgtccg cgaagatggc gttcatcagc aataccgcaa ttgaaggcgg cggccttggc 60
ccccctgagg ccggggcccaa ccgtttcccc cggcgccccc cccgccgccg gtggcggtgc 120
cggagggggg ccgtcgggtg cggccgggtc gctggacatc gcgcagctgg gcgccaaagg 180
cgacggcaag tcggacagca ccccgatgat cctcaaggcg tggaagaacg cgtgcgaggc 240
gacgggggta cagaagatcg tcatcccgcc gggcaactac ctgacgggcg ggctggagct 300
gaagggcccc tgcaagtcct ccatcatcat ccgtctcgac ggcaacctgc tcggcacccg 360
cgacctcagc gcgtaccaa ggaactggat cgagatcgag aacgtcgaga acctgtcaat 420
caac 424

<210> 3304
<211> 435
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-A12
<400> 3304

gggtcgacgc acgcgtctac agacactcgt gcgaacgcgt gggcggacgc gtgggcggac 60
gcgtggggcg acgcgtgggt gcgtgcctag catgcatgca tgtgacgacc tctcctcctc 120
gctgtctctc tgtatctgca actgcaagca aggaaattaa ttaaaagaag atcggcgcca 180
tggcggcaac gacgacgggg atgcagatga tgcaggtgca gcaggcggcg gcgttgetgc 240
tgtgcttggt tgtgttggcg gcgtctacgc gggtcgcgct gggcaactgc cgcgacgact 300

gcatggctgc atgcaacggc tggaccatcg tctgccagct ctctgtgcc agcgcatgct 360
acggagaagt cgggatcaca accttaggta cgtcggctgt attagcgaag gcagaagcgc 420
ctgcatcnag cacac 435

<210> 3305
<211> 288
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A2

<400> 3305

gggtcgacgc acgcgtccgc ccacgcgtcc gcaattttct accctaggca gaagaatcca 60
catgcataat aaaaggtgaa agctagcata agaggtacct aactctaccc tactatagag 120
aaaaagtcag cacattgcaa gaaataataa tggagacgac gacgaagctc cgggtggagcc 180
ggcccggctc ctctctctc gtcgcgcggc cgttctctggc gtccgcccgc gcgtcgggcg 240
tcaacgtcgg ccagttcgac gaccacttgc agaagcggaa ggagctcg 288

<210> 3306
<211> 388
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A4

<400> 3306

gggtcgacgc acgcgtccgc ttcaagcctc cctcaccaaa taaggtcccgc cccttttccg 60
acattcacag gggggacagg aaatcagcgg ccatggcctc gattccggcg acgaccttcg 120
ccgtcatctt atccgtctc ttctgtgcc cggctggcac cgccgtcgac aacgacctcc 180
ccgactacgt catccagggc cgcgtctatt gcgacacctg ccgcgccggg ttcgtgacca 240
atgtcaccga gtacatcgcg ggcgccaaagg tgaggctgga gtgcaagcac ttcggcaccg 300
gcaagctcga gcgtccatc gacgggggtga ccgacgggaa cggcacgtac acgatcgagc 360
tcaaggacag ccacgaggag gacatctg 388

<210> 3307
<211> 429
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A5

<400> 3307

ggtcaagaag tcccgggtcg acccaagcct ccagcctgtg caacgaaacc taagacgctt 60

gaggggaaag cccagctga ggccaccatc tccacacca aggttgacc tgagaccact 120

accatccaca ttgaggttgc ggcaaaacat gcagtagttg agaaggtgga ggaggacaag 180

gaggaggcac taacagtggc ggcgaaacaa gagccagcag ccaccattga gcctcagcag 240

attgctagtg aggtgaccac ttcggaagtg gcggtcgtcg ttgtcgagcc tgagaacaaa 300

gaggaggagg aagttgtgga gaagaccgtc atcgagaagg agaagccatc agcagtccat 360

gcagaggaaa atattgccac caacaagggtg gcagccgagc ccacgacaga attgaagaaa 420

gacacgaag 429

<210> 3308

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-A7

<400> 3308

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acatcaccgc ggcgctggag gatatcccgg tgagcaacac caagcgctg atoctggatc 120

tcaagcccgg cgctcagttc cgcgagaagc tgttctgaa catcagcaag cegtccatca 180

cgttcgggtc ggaccccaag aagcccgcgc tcgtggtctg gaacgacact ggggccacga 240

acggcaagga cggcaagccg gtgggcacgg tggggagcgc cacgctggcg gtggagtcgg 300

actacttcac ggcgtacggc gtggtgttcc ggaacgacgc gccgctggcc aagcccggcg 360

ccaagggcgg ccaggcgggtg gcggtgcggc tgttncggga caagacgcag atctacaact 420

ggcacaat 427

<210> 3309

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-A8

<400> 3309

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ctggcgact gccatgcgcg cggggtgatg caccgggaca tcaagtgcgc caacctgctg 120
gtgaacaaca gcggcgagct caaggtggcg gacttcgggc tggcgaacct ctccgcgcgcg 180
gcgcgggcgc gcgcgtcac cagccgggtg gtcacgtctt ggtaccgccg gccggagctg 240
ctcctgggcg ccacggcgta cgagccctcc gtcgacctt ggagcgccgc ctgcgtcttc 300
gcggagatgc acgcgcgcgc gcccgctctg cagggccgca ccgaggtcga gcagattcac 360
aggatcttca ngctctgtgg ctgcgcgcgc gaagacttct ggcgcgcgtt ggggctctcc 420
cac 423

<210> 3310
<211> 372
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-A9

<400> 3310

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tgaggcggcg gaacggggag gaggatgcga gactgtcttc ttgcaggctg tctcggagat 120
catggaccgc cgtctcgacg acatatcaaa ggacatgtta gcctctagat atgcacatgg 180
ctgacaaaat aacgatgtaa tcaactcaat ggctaataca aagaatggtg tactatttca 240
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaadagaa agaaaaacaa 300
aaagataaaa aaaaaaaata aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagggggggc 360
ccccctaaag gt 372

<210> 3311
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B1

<400> 3311

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ccttcgcggc gcgcgacgcc gccgtggccg cgggcctccc gagatacgag gtcgcggcgg 120
ggcgccgcga cggcatgcgc tcgaacatgg acgacctccc gggcaacttc cccgtgccgg 180
gccaccacgt gccgcgcctc accgagctct tcagccagcg ggggtctctc caggaggacc 240
tcgtctctgt ctccggcgcg cactccatcg gcggcgcgca ctgcttcatg ttctccaacc 300
gcatctacaa cttctcccag gacgccgacg tcgacccgac gctggaccgg gagtacgcca 360
agtggctgcg ccagatgtgc ccgcccgggc agccccggcg cgaccccgag caagcgcc 418

<210> 3312

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B10

<400> 3312

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atcaactcaa caatgactgg aatgatgttc ccaacaacaa aggacttcaa ttaagtgttc 120
ctgtaaataa attgggcata tgggcaaatt cctggtaaaa tgacaattaa gttccccaat 180
ggaaggcaat caactgccca attacaccta acaaaatcct tagaatcatc aaagaatatg 240
cttttggtgc atctccctat cctgttatta atactctaga agaacacctt acacctgatc 300
ttcaagagag agtagctaag atggctcttt aagtgtctgg agacatcctg tattaccctg 360
aatccaaaca ttttcaagaa tttccttcac ctgaagctct aaagggggcg gtcattgctg 420
caacaaaacc ccca 434

<210> 3313

<211> 396

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B2

<400> 3313

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aggtagactac ctttttgcgt tccgtatggt catgggtgctt tttaggcgtg aagtatcatt 120
 tggagactcc ttatacctct gggagatgat gtgggctctg gaatacgaac ctgacatttt 180
 cttcgcagcg tgtgaatgaa caaggtgcag tatataaaca caaagtttct aatcaaaac 240
 tgaaaggact gcgccatttt ggcaagtggg ataataagga taaagacaag gataaggaag 300
 atgctaaaaa tggggctgag gatgggtgaag acggctctgt tccaatttct gttttcatgg 360
 ttgcaagtgt ccttaatgaa aagatagaaa agctgt 396

<210> 3314

<211> 444

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-B4

<400> 3314

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 acaatgcgat gagagccttg ttctctctgg tctcttctg catcgtgcat ggtgagaagg 120
 aagagtcaaa gggcatcgat gcgaaagcgt ccgggcctgg tgggtccttc gacatcacca 180
 agttgggctg ctccggcaat ggcaagacag acagcacgaa ggctgtgcan gangcatggg 240
 catcggcgtg cggcggcact gggaagcaga caatcctcat acccaagggc gacttccttg 300
 tcggacaact caacttcaca ggcccttgca agggcgacgt gaccatccag gtggatggca 360
 atctgctggc gaccacggac ctaagccagt acaagggaca tggttaattgg atcgagaatc 420
 tacgcgtgga taacctggtc atca 444

<210> 3315

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-B5

<400> 3315

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 agatggagaa ggccaagtgc cgcgcggcca tggaggccgc cgaggcggcg cagaggctgg 120

ctgacctgga ggcgcagcgg cgccgcaacg ccgaggtgcg cgcgcgccgg gaggccgacg 180
 agaaggtgcg cgctctggat gccatttcca accacgactt ccggtaccgc aagtaccaca 240
 tcgacgagat cgagatggcc acggagcgct tctccgacga gctcaaaatc ggcgagggcg 300
 gctacggccc cgtctaccgc gcctccctcg accacacccc cgtcgccatc aaggtgctcc 360
 ggcccgcgcg gcaccagggg aggaagcagt tcctgcanga ggtggaggtg ctcagctgca 420
 atccgcacc 429

<210> 3316
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B6

<400> 3316

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 gtctttcacc ggcacgcagg acaagtgcac ggcgtgcgac aagaccgtcc acttcacga 120
 cctctcacg gccgacggcg ccatctacca taagacatgc ttcaagtgca gccactgcaa 180
 aggggtcctc tcgatgtgca gctactcctc catggacggt gtgctgtact gcaagacca 240
 cttcgagcag ctcttcaagg agaccgggag cttctccaag aacttcacgc caggtggcaa 300
 gtcacagac aaggggtgaac tgacaagggc cccaagcaag ctgtcgtctg cattttctgg 360
 taccaggat aagtgcgcag catgccagaa aacagtgtac cccgctggag aagttaact 419

<210> 3317
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-B7

<400> 3317

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 catctccgcc tcctcctcta ttccaaggat attaagctct atggagagat ggtcgaccaa 120
 gaatgaattg aacaacaata tataaggctc catgcgcaac caaacagcta catgtacatt 180
 gcaggcgtgt gtgaaattgt ttatttattt ttgcatgtg cacgcgtgag tatttgcttc 240

tccgtacata ctctatgtat gaacgtgtgc atgtgtgaac taactacatg agacgacaag 300
 gtgcaagaga catgtctggg gcgtcatttg tatggcttta atttttttta ttatatatag 360
 ataaggaaat attttcctta aaaatggagt acaagggatt gttgagaact gcttttggtc 420
 atgatat 427

<210> 3318

<211> 293

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-C1

<400> 3318

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 gaggtggcgg tgctgacggc gcagcagcgt tccaagtcca tcgagggcgc catcgacacc 120
 ggcttctcgt tcaagaactg cagcatcggc ggcgtcaagg gcggccagat ctacctgngc 180
 cgcgcctggg gggactcctc ccgggtcgtc tactcgtaca cgaagatggg ggaagaggtg 240
 gtccccgtgg gctgggacgg ctggcagatc gccaaagcggg agagcagcgg cat 293

<210> 3319

<211> 296

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C4

<400> 3319

ccacgcgtcc gggcggggat gtgcggcatg ccgccctgct cgttggttctc agatgcagca 60
 tgcgtgcact acgtgcggtt ggctggcatt tgcacgctg cgcacttgcc tctgggaact 120
 tgcattaccg gggcgtacat tgaggcgtg ggcattcttc ggatgcgtgc ctatcggtac 180
 aaactctgat gttcactccg gacgattcgt tcgacgcagt tgagttcctg cgtcgcgact 240
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<210> 3320

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C5

<400> 3320

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ccttcgctcc ggctttagatg tgggtgcccc gttcctcgct gggcagtgcc gagcgtaac 120
cgagaaggtc gcgctctcgc cgggtcaagtc tggaggacga gctgctcaga atgcgtcgtc 180
agcattgaga gaagtcattg gctcctacac aaatgcaatc cgcgctcgtc tacgtctcga 240
ccaacgcgtg aggttacgag ccacctgaag aacaagttgg tagctggaat ctcaagtccc 300
aggtcaagaa caggtaccgc aggatgaggg gcttggagga tgctgcgatg tgttcgtgag 360
aggtctaggt cgtcgtctcc cagtcaactt tgggttgctg gaccgttgtc tccatataat 420
gtaataattt a 431

<210> 3321

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C6

<400> 3321

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tggccgcgga tgtcgccaac gccggccacg ccaagccctt gacgcctggc gggcgcggtg 120
tacaccacaa ccacggcaag ttcacggccg ggccgtggaa acccgcccac gcgaccttct 180
acggcgggcg ggacgggtcc ggcaccacgg cgggcgctg cgggtacaag gacacgcgcg 240
cgcaggggta tggcgtgcag acggtggccg tgagcacggt gctgttcggc gacggcgcg 300
cctgcggcgg gtgctacgag gtgcgtcgcg tggacagccc cagcgggtgc aagcccagcg 360
cggcggcgct ggtggtgacg gcgaccgacc tgtgcccggc caacgaacag cagtccgcgg 420
acagc 425

<210> 3322

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C7

<400> 3322

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cgcgtcgagc gaagatgtcg tggcagacgt acgtggacga gcacctgatg tgcgagatcg 180
agggccacca cctcacgtcg ggggccatcg tcggccacga cggcgccacc tgggctcaga 240
gcaccgcatt ccccgagttc aagcccgagg agatggctgc catcatgaag gatttcgacg 300
agccggggca cctcgccccg accggcctga tactgggagg caccaagtac atgggtcatcc 360
aaggcgaacc tggagctgtc atccgtggca agaacggatc cgggggcatc actgtgaaga 420
aaacagggca gtcactcatc attggcatct acgacgagcc 460

<210> 3323

<211> 348

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C8

<400> 3323

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ggtcgtaccg tgacctcaaa ctaagggaaa aaggcaattg tatgaccca gatgggttaa 180
taaaaaataat tggacagttt ccggcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240
aaaaaaaaagag agcaaaaaaa acaaaaaaaa aaaacaaagg gacacaagaa aagaacgaac 300
aaaaaacaag caggcaacac gtacaaacaa aaaaaggggg ggcccccc 348

<210> 3324

<211> 134

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-C9

<400> 3324

ggtcgaccga cgcgtccgaa cacgcatctg cggacgcgtg ggcggacgcg tgggaatcat 60
gcgaactgca gtaaaggaat cggacaacgc gcggagaaaa aggggcggcc gctctagacg 120

atccaacctg gagc

134

<210> 3325

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D10

<400> 3325

cgggtcgacg cacgcgtccg gcgcgcgtcgt cgtccctgcc gcggagcgcc agcgagctac 60
ccgacccgcc gtcaccgttc agctccaaca cggcgcacca ccccgctctcc gtgcccacca 120
cacctagggtt gtccttatcg tgctcgtcgt tcggccacat ggtgaccccg cccaccgaca 180
caccgccgat caccgccacc aagaagcagg acgacaagcc gaagccgacg ccggaggccg 240
ccaccgcggc gaactacgcg tcgttggtgt cgcccaagcg cctcatgcag cgcgctgccc 300
gcgctttccg ccgcagcagg tcgcgcgccc gcgtcaggac ggtcaaggac ctgcccagg 360
aacgggcctc agtgctcgcc gccagcaaca aggtctccga tgaagcggcc gcggctaccg 420
cggtgccgcc tgc 433

<210> 3326

<211> 437

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-D12

<400> 3326

attcacgggt cgacccacgc gtccgcccac gtttccgcgc aggcgggtgg tcggcgtctc 60
actatcaaca accgcgccgc tccggttaaa tttctcctca accggcaagc gcaattctgt 120
gcctcaatca attcggtcgt aaggcaattg agcaagcaat atatatatat atatatatat 180
atatatagga gattcttcga gcgagctagt agcgagatgg gttccgccgt cctcttttac 240
tgcatctgca tcgccgccgt cgtcgcattg tcgtcgtcca tggtcgccgt cgggtccgcc 300
gccccggggg aaacccccaa gttcatctcg gcgagcgccc ttgagtgtc cgctaacgta 360
acggaaatag caaaggcgcg caagctgac gatgtccatg gccacgggct gtgcccgggtg 420

cggttcgnac acacgcg

437

<210> 3327

<211> 431

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-D2

<400> 3327

cgccggtcta gaactcacgg gtcgacgcac gcgtccaggt gagcgcccg c gactcggtga 60
agctgacggg cgggcccagag tacgcggtgc ccctggggcg gcgcgactcg ctctgtgtcca 120
accgcgagga cgccgacaac ctgccggggc cggacatcgc ggtgcccag ctcatcgacg 180
agttcgacaa gcagggcttc aacgtcgagg agatggtcgc gatgctgggc ggcggccaca 240
gcatcgcggt ccgcaagtgc ttccttcac gagaccgacg cggcgcccat cgaccccaag 300
tacaagaaga cgatcagcga cgcgtgcgac ggcaaggact cgggctccgt cnccatggac 360
tccacctcgc ccaacgacct ggacgggagc tacttcggcc tgggtgctgga gaaaaaatg 420
ccgctcaaca t 431

<210> 3328

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D5

<400> 3328

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cgcagtgccg ccccaggcg ctggtgcagc aggtggccgc cgcggcgcg gaggccggcg 120
tgggcctggc cggcgagaac gcgctgccgc gctacgacga cacggcgac gaccaggtgg 180
tggccacggc cgccgacagg gccgcccagg accgcatggt ggccttcacg tacctgcgca 240
tggggcccga cctgttccag cccgacaact ggcgccgctt cgccgcgttc gtcaagcgca 300
tgacggagcc gggcgcgcg gaggcgtgcc gggagcaggt ggagcgggag gccgagggcg 360
tcgcgcacgc caccagccc ctctgtgcag aggccgccgt cgcgtcacc aactgaccgg 420
a 421

<210> 3329
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D6

<400> 3329

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ccacgcgtcc gataataatg aaaggtcccg cccttttctc ccgagatcca caacggggga    60
ggggaaaaca cgtacattca cccggcggca ataatggcct cggttccggc tccggcgacg   120
acgaccgccg ccgtcctcct atgcctatgc gtcgtcctcg cctgtgccgc ggctgactac   180
ccgaatctct ccgactacgt catccatagc cgcgtgtact gcgacacctg ccgcgccggg   240
ttcgtgacca acgtcaccga gtacatcgcg ggcgccaaagg tgaggctgga gtgcaagcac   300
ttcggcaccg gcaagctcga gcgcgccatc gacgggggtca ccgacgcgac cggcacctat   360
acgatcgagc tcaatgacag ccacgaggag gacatctgcc aggtgggtgct ggtgggc     417
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<210> 3330
 <211> 394
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D7

<400> 3330

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ccacgcgtcc gaggggtgtca gaccgtaact gacagctatt tagcaataat acatacatag    60
ctataccctc tttaggtcaa gaggggtggag ttctccttat tcggaggaag agctccatcc   120
tcattctaca ataccaaacc aataaatggc ctctagccca cagtcctcgc catcctcctc   180
caagaagtcg tcgacaccac aagaagcatc ggctttggcg ccaaaatcat cttcaaagtc   240
atcctcgcca ccaaagggtg agtcaaattc ttctcccatt cctccatcga aatcgtccct   300
gtcaccagcg ccagtaccag agaaaagtgg tagtacgtct atctctaaag atgggaacac   360
gaagaagtcg tcctcatcgg cgtcctcggc agat                                     394
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<210> 3331
 <211> 422
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-D8

<400> 3331

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cctccctcac caaataaggt cccgcccttt tccgacattc acagggggga caggaaatca 120
gcggccatgg cctcgattcc ggcgacgacc ttcgccgtca tcttatccgt cctcttctgt 180
gccgcggctg gcaccgcgt cgacaacgac ctccccgact acgtcatcca gggccgcgtc 240
tattgcgaca cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc 300
aaggtgaggc tggagtgcaa gcacttcggc accggcaagc tcgagcgctc catcgacggg 360
gtgaccgacg ggaacggcac gtacacgac gaactcangg acaaccacga ggaggacatc 420
tg 422

<210> 3332
<211> 405
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-D9

<400> 3332

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ccatgccaaa gacctacgac ggaagatacg tgatccaagt gaaggaggga gtgtacgagg 120
agtacgtgac catcaccaag actatgaaga acgtgacctt cttaggtgac ggctccaaga 180
agtccatcgt caccggcaag aagagcttcg ccgacgggat cagcactttc aagactgcaa 240
ccttcactgc gcaaggcgac ggattcatgg cgatcgggat ggggttccaa aacacggccg 300
gcgcggagaa gcaccaggcg gtggcgctgc tgggtgcagtc ggacaagtcc atcttctca 360
actgcaagat ggacgggttc caggacacgc tgtacgcgca ctcca 405

<210> 3333
<211> 447
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E10

<400> 3333

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ttcggtggtc caccatggcg cagcgagcgg tggccacgat gacgactaat aagcccctcc 120
tcctcctcgc cctggcgctc gcgctccttg gtgcggcgcc ggccgccgcg aacgcgccc 180
gcggggcggt cagcaactgg gtggcgatga accagcagag ctacgcgctg tacgcgcaga 240
agtccgtcgg ggacgggggc aaggagcccc tggacaagaa gctgtcggag gcggagaaga 300
agaaggtcac gtacgtggtg gaccccgagc gcaaggcgca ctacaccaac atcaccgcgg 360
cgctggagga tatcccgtg agcaacacca agcgcgtgat cctggatctc aagcccggcg 420
ctcagttccg cgagaagctg ttctga 447

<210> 3334

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E12

<400> 3334

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caccaccgcc cagcaataat ggcgagagc atgaggattg tggcgctggc cttggtggcc 120
ctgctggtgg tggcgggcggc ggcgcccgtg gccaccgcgt acggctgcta cgacgactgc 180
tacgagcgct gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg 240
tgcggtccca cggaccaggg cgccggtgcc gccggcgccg cgccggcttg atcgcccagc 300
gcattcatcg cttcagctcg atataatcgc tgctccgtca gcaaccaca tatgattcga 360
tcaatcttcc tcctctaatt tctcgacccc gtgaatttt tttcctttct attctttctac 420
tataactacta tta 433

<210> 3335

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E2

<400> 3335

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 cccaccata tccggccagc ccaacgaaaa tgcgcgcgc cacagctgcg gtcctcttct 120
 acatcctcgc cgtcgtgcc ctccagcggg ccgaggcacc ggcagagtca ccgaaggcag 180
 gcagtcctgc caaggcaccg gccgagtcac cgaaggcagg cagtcctgca gtcctgcca 240
 aggcacccga gtctgtgcc acgagaactg ccccgctaa ggcacctcaa gccgctcca 300
 ccccgccgc tgcgctgcc ccatcgtcgt cgtcgtctag gaagtctggg ccagctgccg 360
 cgccgaccac cgccgcctct acaccgtctt cttccacgga cgaagagttg agcct 416

<210> 3336

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E4

<400> 3336

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 ccaaccgtag caaggagcca aggacatcac caccgccag caataatggc gcagagcatg 120
 aggattgtgg cgctggcctt ggtggccctg ctggtggtgg cggcggcggc gcccggtggc 180
 accgcgtacg gctgctacga cgactgctac gagcgtcgc ccaacggcaa gaaagacccc 240
 gcctgcacca agatgtgcaa ccaggcgtgc ggctccacgg accagggcgc cggtgccgcc 300
 ggcgcgcgc cggcttgatc gcccagcgca ttcacgctt cagctcgata taatcgtgc 360
 tccgtcagca accacatat gattcgatca atcttctcc tctaatttct cgaccccgtc 420
 gaattttttt cttt 435

<210> 3337

<211> 432

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-E5

<400> 3337

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 gggatgacca tgaaatggcc aaagttattc taagatcact cttttttgc aatcctacgc 120

aagttcaatt aattcgtggt gatcctagat ataagctaata gtctcccgag gaggttatag 180
gaaagtttgt gagctttgaa ttgatgatca aaggctccaa acaaatacatc aacttggagc 240
aaggcggcac ctccacaccc gaggtgcaac ccgtcgcatt caaaggcaac agaggaaaag 300
aaagaatagt ctcaatcaag taggctttcc atcgacgcct ccaagctcga caacgaggaa 360
atggcactca tcatcaagag cttccgcaa atcctcaagc anaggagagg gaaggagtac 420
aaaccccgct cc 432

<210> 3338
<211> 384
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-037-Q1-E1-E6
<400> 3338

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gtggtcgcgg cgccgggtgc tggcgggata ggaagatctc catcccagcc tcgcggtcct 120
agcgtttgag cttgcccga aggcgggcgc cggcgccggc gccacagggc tgcgcgcaga 180
tctcacgtgc ggcgccggtc cgtgcctccc cacctgatct cctccccccc atcctacgcg 240
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acagcccaga cactccgct tcgtttggca gcagccaagc aaagcaagat cccctcttcc 360
tccactttct atttgtccgc agtg 384

<210> 3339
<211> 427
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-E7
<400> 3339

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ggtgtcggcc gtcgtggcgg cgcgccaggg gatggagaag ccgctgacgg ctgtggcgga 120
ggcgttcgag gagctggcgc gcggcatgga ggccgatggc ggggagctcc gcctcgctcc 180

cttcagcgac tcttgcgctc tcgtctccgt gctcttcagc agcctcggga tggccttcag 240
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acgcacgttg agcgacatcc tcgacaagga catccagaat gactgcgtaga agaagcaggg 360
aagccactcc cggaacttac gcacgggtccg tctcggggcnt cggcctcatt aaaggccctc 420
ttcgagc 427

<210> 3340

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-E8

<400> 3340

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tctttaacct acaccgccac gccacctcga cacgatggcc gacgatgatg ctgccgctgc 120
tgcccgctgt gctttggagc agcgtgttgc tgctttcact gctgaagaac gccgcgagggc 180
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tgccgcgctg gacgaggagc gacgcgatgc tgacgcccat gccttggtcg ccgcggcgga 300
agttgtgtcg gctactgtcg ctcttcatgc tcaagcagcg gcgatcctca acgtcaagtc 360
tctcgttccc atcgtctcgc acttcacgtc gccgcacttc aaccgatggc gtggcctctt 420
cctcaacact ctcgagc 437

<210> 3341

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F1

<400> 3341

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acctctctc ctcgctgtct ctctgtatct gcaactgcaa gcaaggaaat taattaaaag 120
aagatcggcg ccatggcggc aacgacgacg gggatgcaga tgatgcagggc ggccggcgtg 180
ctgctgtgct tggttgtgtt ggcggcgtct acgcgggtcg cgctgggcaa ctgccgcgac 240

gactgcatgg ctgcatgcaa cggctggacc atcgtctgcc agctctcctg tgccagcgca 300
 tgctacggag aagtcgggat cacaacctta ggtacgtcgg ctgtattagc gaaagcagaa 360
 gcgcctgcat cagcaccaca agcagcacia gagcgaagcg ccgcc 405

<210> 3342
 <211> 188
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F2

<400> 3342

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 acagatcgat cgattacagc aatggcggcc aaggtgttcc tcctcctccg actcagcatg 120
 gtcgccgtcg tcctgggtgc catcgccaca gtagtgctcg cggaggaagc cgatccgcgg 180
 gcactgcc 188

<210> 3343
 <211> 342
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-F3

<400> 3343

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 cgggaagctc cgggtggggcg tcatccaaat tgaaccgctg tggattacct tcgccaagac 120
 catgatcatc acgtcaagg aggagctcat catccgcggc gacaagacca ttgacggccg 180
 cggcgtgcaa gtgcgcatca acaatggcgc gcagctcacg ttgcaattcg tcaacaacgt 240
 catcatccac aacatccaca tcaacgacat cgtctcctcc aacaaggacg gccgctacgt 300
 ccgcgactcg ccggaccact tcggctggcg caccgtctcc ga 342

<210> 3344
 <211> 428
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-F4

<400> 3344

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gccgtcatct tatccgtcct cttctgtgcc gcggtggca ccgcgcgcga caacgacctc 180
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ggcaagctcg agcgctccat cgacggggtg accgacggga acggcacgta cacgatcgag 360
ctcaaggaca gccacgagga ggacatctgc gaggtggtct tgggtggagag cccgcgcata 420
gactgcga 428

<210> 3345

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F5

<400> 3345

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agcggcagcc acacggccga gatgcacgag tccctttcca atggagccgg cggcaccctc 120
ccccctccca acggtcgggc agcggctgcc ggggcggcgc ggtcgcgcct gggccgcgac 180
gggccgccct ccgagctgga cgtgatgaag gagaagttct ccaagctcct gttaggcgag 240
gacatgtccg gcaccggcaa gggcgtgccg tccgcgctcg cgctgtccaa cgccatcacc 300
aaccttgccg cgtccgtctt cggcgagcag cgcaagctgg agcccatggc gcccgacacc 360
aaggagcgct ggaagaggga agtcggatgg ctgctctccg tcaccgacct caacgt 416

<210> 3346

<211> 339

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-F6

<400> 3346

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ttaggacggt caaggacctc gccgacgaac gggcgggccgt gctcgccgcc agcagcaagg 120
tctccgacgc ggcgtctgcg gtgccgccgc tgcctcctgg tgctgagacc gccagcagca 180
acggtgcccc cgggcggcagc gtggaggtgg aggataagca gcggcgggcg cagcagcact 240
gccaccccca ggctcgttccc gagaagatca tacgggagga cgcgccgcca gttgttgcg 300
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<210> 3347

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<212> DNA

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<223> Clone ID: LIB148-037-Q1-E1-F7

<400> 3347

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ctccaccgcg tcgccgccgg ccggcctctg cccagcccgg gctgcctgcg agggcttctg 180
atggccctcg acgcgcctct ttctccttag tgcccagctt tattgcagat ccagccctct 240
gatcctcgtc ttctttcacc tctccaacat gaaggtaaac accaagatca agctggagcc 300
ggtcatgggg ccgtcgctgt ccctgccgcy gagcgccagc gagctaccgc acccgccgtc 360
aacgttcagc tccaacacgg cgcaccaccc cgttctcgty cccaccacac ctaggttgtc 420
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<210> 3348

<211> 193

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G11

<400> 3348

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gtaaaacctc caactccaag tcgtaccctt cctaaaggte caaccgggaa cccatggccc 120
ggtcaaaaac ttcaggtgga acaatcccaa aattcaacag ttcaaggagc cagcccgtaa 180

acaagggggt taa

193

<210> 3349

<211> 237

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G2

<400> 3349

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tggccgcacc cgcaatgggg tgcgcggcgt cggccgcca cggggccggg ccccgccggc 120

gggggtgggc gcgggcgcgg atacgggggt acagcgagga gtcgacctcg ggtctgcagc 180

cgccgtcgcc gccgcgcaa gaggccagcg agtcgtcgga cgggggcaag aggcgag 237

<210> 3350

<211> 383

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-030-Q1-E1-E3

<400> 3350

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acgtgactat gctgaggctc cacgggtggg aggtgtcgcg cgagtgcgcg cgcacgctgc 120

gcgtcgccac cattctgctg aagaagggtg tggagagggg cctcaccgcc ttccacatcg 180

ggagcatcat gtgcagagag accctgacca aggagtccgc catcgaagag atcgtccgtg 240

aggcggcgga acggggagga ggatgcgaga ctgtcttctt gcangctgtc tcggagatca 300

tggaccgccc tctcgacgac atcaaagaac atgttagcct ctagatatgc acatggctga 360

caaaataacg atgtaatcaa etc 383

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<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E5

<400> 3351

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gaggaacgag tgaagcaacg gctagcactc taccagggcg tcatccctat tcacatgcag 180
ttctctgacg acgcagaaga aactttctcc agagcaatta gcagcttgct gaaagcacia 240
tatgtgaaga agggagacta cgtcactctt gttagagcg gagtgacttc aatctggaga 300
gaggaatcca ctcaccacat ccaagtgagg aaagttcagg tctgatgtgc cgggtgggaat 360
tggtcgtctg agaaattttg atagcgccgc ctgatgtgtt atcatcatt 409

<210> 3352

<211> 394

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E6

<400> 3352

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cctccccctc cggcgccccg gcgcagcagc gcgacagccg acagccggtc ggccagccag 120
cagcgcgggg ctgagcctgc caggccgcct gagttgacct ctgtcctccc cctccctgcg 180
ttttgttctg aggaagaaag cctgttttgc gaaaatgcct cgacaaaata gactgcaata 240
cgttcctgag cttcgaggaa tcgacagtca agctttgacg accaagtgat caagctcttc 300
gagttctacg agattgaata ccctgagcat ctgtttggtg aagggtgatg ctggagactt 360
cgctgatgac gatgatgagt tttaagtcca acga 394

<210> 3353

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E7

<400> 3353

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cttacciaaca acagcagcag caagcccacc cgttcgacga catggcccg ctcggcgccg 120
gcgccgtgtt ggcgctccta gtggcggtcg cggcggtggc cgcgttcctc gcggtgccg 180

cctcggcgaa gtccggggag ctgagcgca tggggttgct ggccggcgaag ggccggcagcg 240
 gcgcggggccc gcagaagtgc tcgggcgcg tgggcgagtg cgacgtggac gaggcggagg 300
 agctcgggct gagcggcgcc gccctcggct ccgacgacgc ggtgcggcg acgctggcgc 360
 agcgggaagcc gaccaaccgg tacatcagct acgcggcgct gcg 403

<210> 3354
 <211> 227
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E8

<400> 3354

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 cagcttacca acaccaacag caccaggccc acgcgttoga caacatggcc cgcctcggcg 120
 ccggcgccat gttggcactc cgagtggcg tgcgggtggt ggccgcgttc atcccgggtga 180
 cggctctcggc gaagtctctc gacctgaggc cgatgggggtt gctggcg 227

<210> 3355
 <211> 324
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-E9

<400> 3355

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 cgccggcgatg attgcgggcg cggacaccgt ctgagtccga tagcggacgt cgatcggctc 120
 ggcgtcgtcg gagccgagcg cgtaaagtgt aactgcgtag cgcaataaccg cgataaggca 180
 aatggcggca cggagctgcg tcgtgtggag cacgtcgtgg atcgaagacc gctagcaacg 240
 agagatgttg caccctgcc a gcagggttgc gttgaatttg ccgcaaccgg acatgaggca 300
 gcgaatttat gtagaagtgg aatg 324

<210> 3356
 <211> 436
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F10

<400> 3356

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tctctttctg catcgtgcat ggtgagaagg aagagtcaaa gggcatcgat gcgaaagcgt 120
ccgggcctgg tgggtccttc gacatcacca agttgggcgc ctccggcaat ggcaagacag 180
acagcacgaa ggctgtgcag gaggcattgg catcggcgtg cggcggcact gggaagcaga 240
caatcctcat acccaagggg gacttccttg tcggacaact caacttcaca ggcccttgca 300
agggcgacgt gaccatccag gtggatggca atctgtctggc gaccacggac ctaagccagt 360
acaaggacca tggtaattgg atcgagattc tacgcgtgga taacctgggc atcacggca 420
aaggaaacct tgacgg 436

<210> 3357

<211> 395

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F11

<400> 3357

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ggaagcatcg aggcaactggc ttgcctgggc tgatgatgac cttccttttg catgcatgca 120
tggtatctca tccttgatga tgatctagct cactagttct ttttaatttc cgcttcattc 180
gcttttccaa attcgattgt gtttcagcca agttgttttag cgggacatct cttgtctgat 240
cttcctgcta aatagagttg gactcctata tatagaggcc ttccggcaca tataatatac 300
gtcggaccaa tattattgtg atcactagtt atgtctctat atgttgcgac ggggataaaa 360
aatttgaatg aaacatagat cacatttcac acaat 395

<210> 3358

<211> 439

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F12

<400> 3358

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 ggcctcctcc cgcaggcgct gggtaagggg aggggaggca ggggacacgg tggcgccgctc 120
 aacccgcagg tgcgcggcat ctgctctcgc accccgttcc cggagggtgtg cacgtccacc 180
 gccgggcggc acgcgtccaa gtaccgggtc atcgacaacc tggcctgtgt gaacatgcag 240
 gtggacgcgt tgcccaagcg caccgcgcag gcgcgcaagc acgtcgcgag gtcggccccg 300
 accatccccg cgcagcagac gcaggcgctc acgttctcgc acaccatgta catgaacacg 360
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 atcatgctgc agctcgccg 439

<210> 3359
 <211> 363
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-F2

 <400> 3359

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 ccacgtctcc tacagcgcaa tcaccatggc gtcggcgagg gccaaagatac gtgcatggaa 120
 agagtgggag aaagaagctg caggacaaga ctacgagttc tcacatgacc cgacgcggtt 180
 caagttcacc cagcagactt ccttcgtgag gcagcatatg aatgtgctga acaagttccc 240
 agcatcattc tacatcagca acttcttccg gcagttcttc aggtccgtga ggcangcaga 300
 ctactgcgcy ctgcgccaca gctttgtcaa cgtccatctg gcccttgga gcaagtttga 360
 ttt 363

<210> 3360
 <211> 390
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-F3

 <400> 3360

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gccggcgacg atcgacgagg gatgaacgcc agagacccgg cggctgacgac gatggctccg 120
 cgcagctcat cggcggcgac gtgcctgtgc ctgcctctcg ccgcggccac gctggcgctg 180
 gcccacgggg cgcaaggagg aggaccatcg gcatcgcgcg cggacctgga caaggctact 240
 gccgagacct tcctcgacat cgagatcgac ggcaagcctg caggccggat cgtgctggga 300
 ctgtttgggg acaccgttcc taacacagca gagaacttcc gagcactttg cacaggggag 360
 aaaggaatgg ccaagtccgg caagcctcta 390

<210> 3361
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F4

<400> 3361
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 cttcattagc acgctaactt gtaatctgca ggatctaagc aaagacttga tttagttatg 120
 gacggattgg taggcctctt gaaagttcgc gtggtccggg gtatcaacct tgcctaccgc 180
 gacgcaagag gcagcgatcc gtatgtcgtc ctacggcttg gcaagaagaa actgaagaca 240
 agcgtgaaga agagatccgt gaaccccata tggcaagagg agctaactct gaccgtcaca 300
 gatcccagcc aaccactgaa gctgactgtt tgctacagga ggtgttcgac aaggacacct 360
 tcagcagaga cgacccatgg g 381

<210> 3362
 <211> 371
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-F5

<400> 3362
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 aggacaccgc ggcgaaaatg actgatgcga tggccgccgg tgaataactc cggctgggggt 120
 agggcggttg tgccacgtat gggttgtctc gcccgcacgt tatccattcc cgactgcgca 180
 cgaacctgga cggcggcggc acgagttttt gcgcagagag gtcgccgtcg gtgagatttt 240

tctgtcgcgg tgatctgata cccaattgag ttactgttagc atggcggaagt tcagttcaga 300
 cgcctgacag agccttttga agcttagttt tctctcaatt ttgaatggct acttaacca 360
 atatctgcat c 371

<210> 3363
 <211> 385
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-030-Q1-E1-F6
 <400> 3363

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 cagccagctc gcgaaaataa tgaagagccg cagcatggca tcatcggccg cgctcttggt 120
 gctagccctc gcgctagtgg cggccaccgc cccacaggta gcggaggcaa agaagaagag 180
 agcggcggag agcggcggag cggcggaggc gaagaagatc caggacgact tctgctcgac 240
 gctgtgcgag ggcaagaagg ggacggacct ggtcgtgtgc aaggagtcct gcgcgctctc 300
 ccagcagtc aacctggtgc tgtacggcag gatccagtgc aagggaagt gcaccgagca 360
 gaagggcatc acggcgccgg ccatg 385

<210> 3364
 <211> 384
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-030-Q1-E1-F7
 <400> 3364

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 gcggcggtcca ccggcttctc ctgggccaag aagccccggc ccgacgccac gacggcggcg 120
 gtaactgtga cgatgcggag cggctccatg gggccaggga ccaacaggaa caacaacagc 180
 ggaggaggag acggagcaag aaccacctcc ggctccggcg ccaccgccac cgccacagca 240
 gcggcggtcac catacagggc ggagaagcat gaggtgatca agcagtgggc acaggtcgct 300
 gacgccttca gcgcctctga agcttacaac agcaggttga ggcagacgct tgacgccaag 360
 cagctcaaga ctggaatgat gcac 384

<210> 3365
 <211> 390
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-F8

 <400> 3365

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 tgatatccgc gcaaacaatg ctagttgccg ccgcggccgg cgccaagcgg caggcgccgg 120
 tgatgttcgt gttcggcgac tcgacgctgg acgtcgggaa caacaacttc ctgtcggggg 180
 cggccgtccc cagggccaac aagccccact acggcgtcga cttccccggc ggccatccca 240
 ccggaagggt cagcaatggc gacaacacgg ctgacttcgt cgcaagagc atgggggtga 300
 agagtagccc tccgcggtat ctgtcgcttg caccacaacgg ctccagccct ctgtcgcgc 360
 agactgctct caccactggt gtcagctacg 390

<210> 3366
 <211> 382
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-F9

 <400> 3366

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 cgtcccgttc gttcgattcg ttctttccgc catggaggct cggaggaagc ccgcggtgtg 120
 ctgtgccctt cttgtgctgc tcacgtcgc ctccagcgca acggtgtcga ctgctcatga 180
 cgagagctgc tggaaggacg acgaccacca ccctatctgc tttccgaag actgctggc 240
 gacctgccag gatcacggcc acgcggacgg ccgctgcaac tgggcatggt cgtggaggcc 300
 gtattgccag tgctgtttgg cggactgcca ataggcgca acagctgcgt cgcattggcgt 360
 cctggctgcc tcgccggccg at 382

<210> 3367
 <211> 450
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G10

<400> 3367

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ctccaccccg gccgcccggc gccccacag tgccgtacct cgaccagcca tgcgcattct 120
cctgctgtcg ggggagacta acatggccgg ccgccgagga gtacaccaca ggcaactggga 180
cggagtggag cccccacaac gcgcgccgga tccgtccatc ctccgccttg cctctgcgca 240
gcactgggat gaagcccgcg agccgcccta cgccgacatc gacacacca agacctgtgg 300
catcggggcc gggatggcat tcgcccgcgc tgtgtctctc agcctgcagg aggacacccc 360
tggcgcggcg gccagatcg ggctcgtgcc gtgcgcggtt ggcgggacgg ccatccggga 420
gtggtccttc gggaaacatc tgtacgagca 450

<210> 3368

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G11

<400> 3368

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cgtcgtgtgc cggcagtggg acgagggaca acggccccc cgacaaggac cgtggcatga 180
ctgtgtcagg caataccaga tccagggagg ccaaggcggt ttgaagcttc aactcatcgc 240
cgcccccgcc atgtctcagt cagctgtctc gttttatatt tgaagtgcc aaatacttgc 300
aaatttccgc tgctactaga tttagctgag aagaacgaga tgatccaggt attagtggat 360
caggagttgc aaatgtggga tcccacatgc attttttctt ttgccgatgt ttcgtcgtct 420
tca 423

<210> 3369

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G12

<400> 3369

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cttttcttgc cacggcaaaa caccttcgcc ggcgagagca tggcgatggc gtaccgtgtc 120

ctggagggtca ccctgggtgtc ggcaaatgac ctcaagaaag tgtcgctctt ctcccgact 180

cgcatctacg ccgtggcttc catctccgga ttcgacctcc gcatcccttc ccacagcacc 240

caagcagacc acagcaacgg ctgcaacccc tgctggaacg ccgtgggtaca cttccccatc 300

ccggctgccg ctgacacccg cggcctcgca ctccacgtga ggctccgcgc ccagcgtcta 360

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cgccgac 427

<210> 3370

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G2

<400> 3370

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gagaatgggg cagagattaa gtactccacg gtgcagaatt ggtactccgg tgatgaggag 120

gggagaggag gcatttataa ctttgtgaca aagaggggaa ggtgcaaagg gcgggggttcg 180

aagatctcat ggacacaggt tgagacagga tctgctatta catggaagta cccaagcgtt 240

gagcttgtcg gggatgacag tggtggagag ttctactcgg ttgcgcttac aaacgattgc 300

cagcatgcag acacagggac gatcatgac cacaagggga aaaattcacg cagccggatt 360

atatccaacg gcatctc 377

<210> 3371

<211> 345

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G4

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 aacattcttt gtgcctgcaa ggtcttgaac ttgggtgagaa ccaactgtgag tcaaattggt 240
 tagacagggtg gatggctgta cgtccatggg agaacagggtt acttgactgt aatgccaaag 300
 agagtctgcc aacgcatgaa gataaggatg acgaagcaaa ttccc 345

<210> 3372
 <211> 405
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G5

<400> 3372

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 gcaggcccca gctgaggccg ccgtctccac acccaatggt gcgcccagg ccactccaat 180
 ctccgttgag gttgcggctg atgaacagg agctgagaag gtgggtgggtg aggagccggc 240
 tgccgcgccc gacgttgagc atcagaaggc taatgagggt ctgcgtccag acgcggccgt 300
 cgccgagccc gaccacaatg acgacgaagc cgtggagaag atcgtcttcg atgaggataa 360
 tccagcggca gcagcccatg cagatgaaaa tgtcaccacc gccgc 405

<210> 3373
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-G6

<400> 3373

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 gcgttgggcg ggcttctggc gtcgccgctc tcgactctgg aggcggccct gcggggcctc 180
 aacctcgcg ccccttcgcg ccccgtagcg gggcgatgt cggcgccgt gcggtggctg 240
 ggagtgtacc gggagggtgt gtcgctcggc gtgctgctct cctgggtccc caacatcccc 300

tgggaccgcc agcccttctc ggccctgcgc gacctctgcg accccttcct cgccctgtgc 360
 cgtgaagtca tgccccccgt gtccgggggc aagctcgacc tcagcccgt tgttgcac 420
 aggctattga catcatcat 439

<210> 3374
 <211> 444
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-G7

 <400> 3374

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 cgccgccgac ctcgtcaccc ccaggaaggg cagcctcggg cagcccgatga cccggggccc 120
 ggcgctgtgg atcaccttcg cgcgcgacat ggtgatcgag ctctgccagg agctcatcgt 180
 gagcagcgac aagaccatcg acggggcgcg agcgcaagtg cacatcgtgg gcgcgcagat 240
 cagctgcag aacgtgcgca acgtgatcct ccacaacctg cagctccacg acgccgcggc 300
 gcacggcggc ggccgcatcc gggactcgca gcaccactgg ggcgtgcgcg gggagagcga 360
 cggcgacggc gtctccgtga tgggggtccag cgatatctgg atcgnacacc tgtccatgag 420
 cagctgcgcg gacgggctgg tgga 444

<210> 3375
 <211> 347
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-G8

 <400> 3375

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 gcgctaatta atccttcttg ctactaatta actccgggta attgggtggc caccatgtat 180
 agcgtcgtgg agttctctat attacaccat acagggaaat gtggagaccg gtgttgcatt 240
 ctatacaatt tcttcttata attatatgat tcacgggttt taaaaaaaac aaccacagac 300
 aaaaaaagaa gcacaatacg aaaaaaaagg gcggacgctc tagagga 347

<210> 3376
 <211> 429
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-G9

 <400> 3376

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cagagtaaca tggccggccg cggcggcgta cacgacaggc actgggacgg cgtgggtgccc 180
ccagaatgcg cgccggatcc gtccatcctc cgcctttcct cggcgcagca gtgggaggaa 240
gcccgcgagc cgctccacgc cgacatcgac acaaccaaga cctgtggcat cggggccggg 300
atggcattcg cccgcgtgtg gctctcgagc ctgcaggagg acaccctgg cgcggcggcc 360
cagatcgggc tcgtgccgtg cgccgttggtg aggacggcca tccgggagtg gtccctcggg 420
aaacatctg 429
  
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<210> 3377
 <211> 428
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-H1

 <400> 3377

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acaagtccgc ctctttctct ccaactccca tgaagccgcc gcggtgggaa tctcacccat 180
aactccctcc aaaccactgc tttccgcaac caacctctgg cccgaacgca gccgctggca 240
actggcatct ccatccagcg gcagatacat ttcaaggagg gaccgcgctc tcttggtca 300
tcaggggaca tattgaatcc ggatcatccc tgctctgac gagagtggat tttgaatctg 360
cagttggctc tatcacctat ccaaacttac gagctgacat tttgcattct nttgcgatgc 420
aaacgaaa 428
  
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<210> 3378
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-H11

 <400> 3378

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 gtggaaagtg tatctgagct gatggcccct cctccccggg actccagcta cggtttccat 180
 gttcccggcg agaaggagtt ctccaaggag cctcctcagc tgccgtccca gctctatctc 240
 ggcggtgctga attcccggag caccgaagaa ggctgcgcga ggccgaggca cgtcgtcctc 300
 gaccatctct acatcgagaa gggctggggc gcacagccgc tgggtggccct cggctacacc 360
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 agctaaccat 430

<210> 3379
 <211> 384
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-H3

 <400> 3379

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 ggcaatcctc ccaacacgcc cctccggaag gccgcccctc ggggaacgcc aatgactgca 120
 aggcgggggtg ttacgaggtc acggggccact ccaaagtagc atggangact gcatgaagag 180
 gtgcnaagag atcgttgcta agcagggggc tanggaccct tacaanggat acanacttga 240
 catcccatga actagttaat gtcctatat catctgccta tccatgcatg cattgcattg 300
 cgtatgcaca ctgtgcgtgc ctgccacaa agttcgacaa cacaccgatc tcgatggatt 360
 tgtaatcggt gtcactcgat cgag 384

<210> 3380
 <211> 383

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-H4

 <400> 3380

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 caaggcgtac gtggtgaagg cggccgaggt caccaaggcc tgcagcgtea cctgcgccaa 180
 ggagaagaac ccgcgcctca gcgagaactg caagaggtcc tgcacccctc ctccttcttg 240
 aagcgaagcc ccttgaaatg aatgaaccat gcatgcatgc atgtatgcat gcgcgggggt 300
 gacgtggcgt tcagctcaag cgctgaccga gtctatacgt acgtcgtcac cggctggcca 360
 cgcatgcgat aaccacctga tat 383

<210> 3381
 <211> 386
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-030-Q1-E1-H5

 <400> 3381

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 cgcggaaga agggatctgg aggcataact gtgaagaaga ccggacaggc gctggtgatc 180
 ggcattctacg acgagcccat gacccttga cagtgaaca tgggtggttga gaggctcggt 240
 gactacctcg tagagcaagg cctgtgaatg catccaaaca acgacaccaa cgccaacatt 300
 aattaattag tagtctccat gccctgngat tgtgcgtggc cgctccgttg aacaccatcc 360
 atccntcggt ccgcaatttt tcccc 386

<210> 3382
 <211> 423
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-030-Q1-E1-H6

<400> 3382

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gttctcaaca tcgtttcgtg cagcctgcat cggtcgacga gggctgcacg aacgatgggg 120

tccgcctccg cctcagtgac gacaaccagc ctgctggcgc tggcgctggc agcgctggct 180

ttcgtctcca gggccgcggc gcagggcaac ggctgttcca gcgtgatgat gaccctggcc 240

ccgtgcatgg acttcatctc cagcaaggcg tcggagccgg ggatctcctg ctgctcggtg 300

ctggccggag tcgtgcagac cgacccccgc tgcctctgca tggtagtgga cggcactgcc 360

acgtccttcg gcacgcat caaccagacc aaggcgctgg agtccccgg cgtctgcaag 420

gtc 423

<210> 3383

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H7

<400> 3383

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catggctatg gctcgtccg tcgcgcacct cttctttccc atcctcctta tctccaccgc 120

gcccgccgtg cgggcatca ccgacgcgc cggcgccccc ggatacctcc aggaggcgtg 180

caacaagacg ctgttcccca aggtgtgcat gcacgcgctc aaggacaacc cagagtgcc 240

ggcggagacg gcggtaacgc cgcgcgggct ggccgagctg ctgctgtacg tgcggccga 300

ggcgggcatg accgtggccg cgttcgcgca ccacgagctc aacgccatca aggacgacga 360

cgtcctgtac aagtgcacg acacctgctc cgaggacat 399

<210> 3384

<211> 192

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-030-Q1-E1-H9

<400> 3384

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aacacgtaca ttcacccggc tgcattaatg gcctcgggtc cggctccggc gactaccatc 120
gccgccgtca tcctatgcct atgcgtcgtc ctctcctgtg ccgcgggtga cgactcgaac 180
ctcgccgact ac 192

<210> 3385

<211> 376

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A1

<400> 3385

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ccggaccctc cgctcgactga cccatctctc tagttataat ttttctctcg tccttgcatt 120
gcatattagt tgctatccat tggtaacgca caacagtaaa acgacaaaca tccaacagct 180
atattatgtt cgacggtgta acaccctgaa ttttagggta taaaatttct tctctaaatg 240
caaaccaaat tcaagtgtta cctcttgtct ctctctctat cttttccttt tgattaaaag 300
taagtgaatt aggcgagggg ttaattatct aatttgtcaa aacttatgtg agtcatgaaa 360
tgttgtatca tgctga 376

<210> 3386

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A11

<400> 3386

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ggtatggcgt gcagacagtg gacgtgagca cgggtgtggt cggcgacggc ggggcctgcg 180
gcgggtgcta cgaggtgcgc tgcgtggaca gcccagcgg gtgcaagccc agcgcggagg 240
cgctggtgtg cgacggcgac cgacctgtgc ccgccaacg accagcagtc cgcggaacagc 300
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<210> 3387

<211> 343
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-031-Q1-E1-A2

 <400> 3387

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 ttgcaagcaa taataatgga gacgacgacg aagctccggt ggagccggcc cggctccttc 180
 ctctctgteg ccgcggcggtt cctggcgctcc gccgccgctg cgggcgtcaa cgtcggccag 240
 ttcgacgacc acttgacgaa gcggaaggag ctgcccaggg cgtcggcgaa ggaagcgtac 300
 angcccgacc cgtacaacgt caccaacagc ttcaacgccg ccg 343

<210> 3388
 <211> 184
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-031-Q1-E1-A3

 <400> 3388

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 tcaacgacga cgcagtagta catatggaga aggcggcggg cgtgagcgcg gcgaggctgg 120
 ccgtggcggc ngcngcggtg ctgctgtgcc tgctgctgct gctggcgggc gggccgcacg 180
 gggt 184

<210> 3389
 <211> 356
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-A6

 <400> 3389

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 acatgataga caacatcgac ggccgtcggg taaccaagaa caaggcgcg atccaagtgg 120

gcgactcctc ttcgtcggac gaaagcgaca gggagaagga ggaagatgaa gaagaagcac 180
atgaggaagt ggccaaggcg cccccgttgg gttggaatca tcacaatcac cacgaagcgg 240
ccggcgggcat tggcaacaac agcaacagga ggcggcttct gtcgaagcag ctgtccatga 300
aggagaccac cagggagatc aaatgggaga agcgccggcg gcagatactg cggcgc 356

<210> 3390

<211> 290

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A7

<400> 3390

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ctccgcgcca gcgactcctg gccgcaagac cagatcatgc agatcacctg cgccttcaac 120
cacttcggca ggggcctggt gcagcggatg ccaaggtgcc gctggggctt cttccacgtt 180
gtcaacaacg actacacgca ctggctcatg tacgccattg gcggcggcga cgcgccaacc 240
atcatcagcc agggcaaccg ctacatagca ccaccaaaca tcgccgcca 290

<210> 3391

<211> 353

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A8

<400> 3391

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ttccgtctct tgtccctgtc gtcctcgccc ggtttccccg gtttttgaga ggggaaagag 120
gaggcggagg agagggatgg ggagggacga gaggttcccc gtgtgggagg ccgcgctcgg 180
cgccggagtc gccgcgcct tcgccgctgg actcgctcgg gtctaccttt ccatgccgga 240
ctccgactac agcttctctca agttgccacg taatctcgag gaactccaaa tcctcactgg 300
ccaccttgac aactatacta gtgactacac cctacatgtg ttggtaggtt att 353

<210> 3392

<211> 373

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-A9

<400> 3392

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ccctgcaagt cctccatcat catccgtctc gacggcaacc tgctcggcac cggcgaccgc 120

agcgcggtacc aaaggaactg gatcgagatc gagaacgtcg agaacctgtc catcaacggc 180

cacggcacca tcgacgggca gggagccctg gtgtggagca agaaccagtg ccagcattct 240

tacaattgca agatcctccc gaatagcttg gtgctggatt ttgtgacgaa cgtccagatc 300

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gtgctgatcg aca 373

<210> 3393

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-B11

<400> 3393

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gateccctcg tacctggggc gccctggaa ggagttctcg cgctcgtca tcatggagag 120

caccatcgcc gacttcgtcg agccagaggg gtacatgcc tggaacggcg acttcgcct 180

caagacgtc tactacgcg agtacaacaa ccgcgggccc ggcgcggca ccagcaagag 240

ggtcaactgg cccggcttcc acgtcatcgg acggaaggag gccgagccgt tcaccgccgg 300

gccgttcac gacggcgcca tgtggctcaa gtacaccggc gcgcgcaca tacttgggtt 360

caagttctaa aggccgatg gcatggcata catcacatca tatatagtga 410

<210> 3394

<211> 274

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-B4

<400> 3394

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 aaataaaaaa aaaaaaaaag gatggccgtt ctaaaggaat aaaacattaa ataagcgtgg 120
 atggcagggc agatcgattc taacttaaaa aaaaatttga attcattggc cttcgtttta 180
 aaccgtaatt acagtcaaat gcctgtcggt attcaactta atccctttga aaaacatccc 240
 gttttcaata taaggcgcgt tgctgaaaat gccc 274

<210> 3395
 <211> 348
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-B5
 <400> 3395

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 cccgtgccgc ccccttttgt acgcgccgag gacaccgcaa gcgataaatc cgctacgctc 180
 gactttttct catcagcacc ggcagcatct gtaaccgcac gggccaaggc cgaccggcgc 240
 aggcacgctg acatctccgc caatctcagc tcgcgccggg gcagcaggca tacggttgcc 300
 actgaattag agtcatcatc cgcatctcc gttcctatct catcgggg 348

<210> 3396
 <211> 373
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-B6
 <400> 3396

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 gttcctcaac ggcgccttct gcaaccagtc cggcggccag aacgagcgca agtacgacag 180
 gctcgacctc atccaggcca agggcggcca gtacgccgag tcgctcacca ggtacgccgc 240
 cgcgtcaac tgccgcgtcg gcaggaagtg ctagtgcggtg tgcagctcta ggctgcagct 300
 ttcacattg gcgatcgatc gtaacaatgc aagggttgtgt tgtatataac tcttgtgttt 360

ggaatgccgc ccg

373

<210> 3397

<211> 372

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-031-Q1-E1-B7

<400> 3397

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aaacacgtgc atgcaccccg cggcaataat ggcctcagtt ccggctccgg cgacgacgac 180

cgccgcccga atcctatgcc tatgcgtcgt cctctcctgt gccggggtg acgaccccaa 240

cctccccgac tacgtcatcc agggccgcgt gtactgcgac acctgccgcg ccgggttcgt 300

gaccaacgtc accgagtaca tcgcggggcg caaggtgagg ctggagtgca ngcacttcgg 360

caccggcaag ct 372

<210> 3398

<211> 369

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-B8

<400> 3398

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caagtacccc ctctgcatcc gctttgctac caagtctggc ggctaccgta tcgccgatga 120

tgtcatcccc gccgatttca aggctggcac cacctacaag accactctca gcatctaata 180

agcctctgat aagtgatgac gaataatatt tcgaaagagc tcatctagtc cacgtgccaa 240

cgagccaata tttaaatttt ttctatggtt attttgtggc acaacaccat ctcttcctgt 300

gccttggtgt gttggttgat ttattacat gaattgaaat aactgtgta tttaagattc 360

ttttgggtg 369

<210> 3399

<211> 394

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C11

<400> 3399

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 caccatgacc ggcggggccc ggtacccgat tccgctgggg cgcaaggact cgctgtcgctc 360
 gtcgcccaca gcgcccgcgc tccagctgcc gcac 394

<210> 3400
 <211> 86
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C2

<400> 3400

cgcgtaaaaa aaaaaacaaa aaaattaaaa taataaaaaa aaaaaggagc ccaaaccaaa 60
 aaaaaaaggc cggacgctct agagga 86

<210> 3401
 <211> 374
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C5

<400> 3401

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 gaacgcgccc ggcgggggggt tcagcaactg ggtggcgatg aaccagcaga gctacgcgct 180
 gtacgcgcag aagtccgtcg gggacggggg caaggagccc ctggacaaga agctgtcgga 240
 ggcggagaag aagaaggtca cgtacgtggt ggaccccagc ggcaaggcg actacaccaa 300

catcaccgcg gcgctggagg atatccccgt gagcaacacc aagcgcgatga tcctggatct 360
caagccccggg gctc 374

<210> 3402
<211> 344
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-C6

<400> 3402

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ggagacgacg acgaagctcc ggtggagccg gcccggtcc ttctctctcg tcgccgcggc 180
gttctctggcg tccgccgcgc cgtcggggcg caacgtcggc cagtctgacg accacttgca 240
gaagcggaag gagctcgccg aggcgtcggc gagggaggcg tacaggcccg acccgtaaa 300
cgtcaccaac agcttcaacg ccgcgcgtcca cagagctgtc agca 344

<210> 3403
<211> 348
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-C5

<400> 3403

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gtcggccgtc gcgtgtctct gcctgtacaa cctccttttc gtctccctgt ccgtctcgga 180
cccggcagca gcaccagccg tccccgcgc cgccggtggc caccatggca gcaacgttcc 240
gtccgggtca ggaaccgcca acgtcgtcct ccgcttcggc ctgtccgggc agccgctcgg 300
cttcaagaac cccgcttcgc ccgcgggcct cccggagatc gacacctt 348

<210> 3404
<211> 433
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-C6

<400> 3404

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cggccgctaa gagatgtaga aagtgaaga agttcctccg cagcgcgggc gcgtgctgct 120

gctcgccgtc ggctctctcc gccctgctg gtggtgtgcg cggcaacgaa gaggcgtcga 180

cgtcggcgct ggcttccgcg ccagatggca agaaaaagaa gaggtggagg aagagaaagt 240

tctggagaaa gaagaagaag gccaagaagg agagcgacga tggcagcggc gagctcgtgg 300

atctcgtaa cagcttctcg gccaaagtccg acgtgtgcaa gaacgtgaat gcggccgacg 360

agatcctacg gggctgcaac cagaacatgc ccagcagggc gctgacgttc agccagctgg 420

gcgccgcgac cga 433

<210> 3405

<211> 434

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-C8

<400> 3405

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tttgtaaagg cgcacaatgc aattgcggat tcccattctc ttgaccggaa ttctgggacc 120

acagcattga cggtccttat atttggcagg aactgcttg ttgcgaatgc cggtgactgt 180

cgagctgtat taggaaagcg aggccgagct gttgaactct ctagagacca caaaccacg 240

tgcatagttg aaaggctcag aatcgaaaac ctgggtggta ccgtctttga tggctacctc 300

aacggtcagc tggctgtagc aagggaatc ggtgattggc acatgaaagg ctccaagggc 360

tctgtatgcc ctcttacacc agaacctgag tttagggagg ttaggcttac tgangaaaat 420

gagttcttga taat 434

<210> 3406

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-D1

<400> 3406

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gcgcaggcgt cgacgaagtc gccgtcgatg aagtcggtgg agaagacctg gagcttgctg 120
ccgaggccct tggcgaagac ctccggcgatg aacatccgcg cgtagccgtg gatccgcctc 180
gtcacggggc acacgcacac caccggggtt tccggcctgg gcgtcacctg gttctccacc 240
cggtacaaga acccgcgggc cgccaccggc ggctgctgcc ccaggaactt gaggttgctc 300
tcgaacttgg tctccggcag gtccgtgctg atccagttgt ccctgaggta cccggcgctc 360
cacaggggct ccccgggccc gggcgccggc gacctgcgcg gcttccacac gcagatgacc 420
cggcgcggga gcagctccgc gacggtc 447

<210> 3407

<211> 248

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-D12

<400> 3407

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taataacgga tgctactacg taccgtacgg ataatgggta cgtagctaca tgaagctgtc 120
tacggataat gccgtccgtt tactcctctc acatgtttaa aatttttagtt tcgtttcttt 180
cgatttcgaa cgctgttgca tattcccaga cccaataata aagaaccoga cagacaatgc 240
aacaacct 248

<210> 3408

<211> 451

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-D2

<400> 3408

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cgtgcagcca cagacaggcg tccgggcacc atgtctttca cgggcacgca ggacaagtgc 120
acggcgtgcy acaagaccgt ccacttcacg gacctcctca cggccgacgg cgccatctac 180
cataagacat gcttcaagtg cagccactgc aaaggggtcc tctcgatgtg cagctactcc 240
tccatggacg gtgtgctgta ctgcaagacc cacttcgagc agctcttcaa ggagaccggg 300
agcttctcca agaacttcac gccagggtggc aagtcacag acaaggggtga actgacaagg 360
gccccaaagca agctgtcgctc tgcattttct ggtaccacag ataagtgcgc agcatgccag 420
aaaacagtgt acccgctgga gaagttaact c 451

<210> 3409
<211> 248
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-D3

<400> 3409
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cagcagcaag ctaattaana ggggtgttgg tttctagga ctaatgttta atcccttcaa 120
tttaatcttt ttcagcatat aaattgctac atacataaac tataccttat tttagtttct 180
acatttaata attttctcac tatattctac tacactttca tgactaatta ttactcccta 240
aaaaccaa 248

<210> 3410
<211> 404
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-018-Q1-E1-D5

<400> 3410
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gaaggaaaga aaactccaaa tggaaaaaca ggagccaaga agtaagcaac tcagttgaaa 120
cttcgttttg ttgggaccaa cttcaccatg gccggggaca gataaacatg ttgacccat 180
ctactgggtg atacattggt gttttgacac acggatatgt cagtcctatt ggttgagaga 240
gcatgctgga tcttcggcca tatgctgtaa atcgcttgtt aatttttgtt ctactagtag 300

acgaagaaat caaggaaaaa aaaccttgac tacgggaaga aaatcacggc cacaggggta 360
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<210> 3411

<211> 379

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-D7

<400> 3411

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 agaaggagaa gccatcagca gtccatgcag aggaaaatat tgccaccaac aaggtggcag 120
 ccgagcccac gacagaattg aagaaagaca ccgaggagga gatatagatg gagaaggaga 180
 agccatcgct aagctaattg actgcatgtc aattggctga tgccatgatga tcaatgtgca 240
 agaaagagat cgaccactaa ttggcataca tgtttaagtc gggagagaga ctcggtcacc 300
 ttgtaaaciaa aacaaacctt tgatgtctcc cgttttccct ccatgggggtt ctgataatac 360
 aacatcctgg ggcttattg 379

<210> 3412

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-D8

<400> 3412

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 ggggcacgtc ctagatcggg ggcgcctgcc tctcgccgcc gatacgggtg ctctcgcggt 120
 ctcgctcccc ctgcgaggtc ttttggtttt tttagttcct ccccttgctt cttggaggtg 180
 tttgttgccg tctcaccgcg agttcttgag acatgcagag ccagatagtg tgccacgggt 240
 gcaggacct tctgttctac ccaagaggtg ctccgagcgt gtgttggtgc gtatgccatg 300
 tggtcaccaa tgtgccgctt ccagcaatgg agatggctcg acttagatgt ggtggctgcc 360
 agacattatt gatgtatgct cgcagtgcaa caactgtaag atgctcatgt tgtgacacag 420
 tcaatcttgt cagaccagtt agtagcatag ct 452

<210> 3413
 <211> 415
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-D9

<400> 3413

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gatgactcgt ctgtgctcgc ggcgttcaag aagttcgcca ggttcaggag ggtgctcaac 120
atcgaggcca agatcagcgg cgctccaaa ccgtcgggtg atgacatcaa gaagtacgcg 180
gacacggtga ggggtcaaccg gaactccgtg gcgcagatca atggctactt cctgacgcac 240
ttcaccgaca cggtcagcaa cctacaggac gccaacatca ccgtgtttgt cggcgtactc 300
aagaacgagt tcatgaacct cggcttcgac tacttcgctg acccgacggt cgagatcgct 360
acctacacgt tggcagtgct ggctgatggg ctcgtcacgg acaaacctgg cactg 415
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<210> 3414
 <211> 418
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-E10

<400> 3414

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gacgacttct tcgtccctct cttcattagc acgctaactt gtaatctgca ggatctaagc 120
aaagacttga tttagttatg gacggattgg taggcctctt gaaagtctgc gtgggtccggg 180
gtatcaacct tgctaccgc gacgcaagag gcagcgatcc gtatgtcgtc ctacggcttg 240
gcaagaagaa actgaagaca agcgtgaaga agagatccgt gaaccccata tggcaagagg 300
agctaactct gaccgtcaca gatcccagcc aaccactgaa gctggagggtg ttcgacaagg 360
acaccttcag cagagacgac cccatgggag acgcggangt ggacgtggcg ccactgat 418
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<210> 3415
 <211> 239

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-E12

 <400> 3415

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 ctgagcaagc tgcagcaaca cctcggcacc tgacctggcc atgcatgcac acgtatacta 120
 taatctaaca acgtagctga cctgggcaaa ttgccagcct gacaggggcc aggggtgctcg 180
 aatgtctcac tctcacgcc gactaacttt ccatcaaaat tgattcttgt tcataactca 239

<210> 3416
 <211> 419
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-E2

 <400> 3416

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 ccgccacatc tattaggtgc agccatgggt gcctgtgcaa cgaagcctaa gacgcttgag 120
 gggaaagccc cagctgaggc caccatctcc acacccaagg ttgcacctga gaccactacc 180
 atccacattg aggttgccgc aaaacatgca gtagttgaga aggtggagga ggacaaggag 240
 gaggcactaa cagtggcggc gaaacaagag ccagcagcca ccattgagcc tcagcagatt 300
 gctagtgagg tgaccacttc ggaagtggcg gtcgtcgttg tcgagcctga gaacaaagag 360
 gaggaggaag ttgtggagaa gaccgtcatc gagaaggaga agccatcagc agtccatgc 419

<210> 3417
 <211> 324
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-E3

 <400> 3417

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 agcgccacat ctagtaggtg cagccatggg tgctgtgca acgaagccta acactcttga 120
 ggggaaagcc ccagctgacg ccaccatctc catacccagt gttgcacccc agaccgctac 180

catccacatt gaggttgagg caaacacatc cagtaggtgt gaaggtcgcg gaggtagccg 240
 tgacgatgga ctaacatgtt gctgcgaagc actagcgagc agccacgatt gagagtcagc 300
 acattgagag tgaggtgacc actt 324

<210> 3418
 <211> 435
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-018-Q1-E1-E4
 <400> 3418

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 aggcgcactc gggcgccatg atccgcgact cgaagcggca ctacgggctg cgcacgcgga 120
 ggcacggcga cggcgctctc gtgctgtcgt ccagcaacgt gtggatcgac cacgtgtcca 180
 tgtccagctg ctccgacggg ctgatcgagc tggatgaacgg gtcgacggcc atcaccgtgt 240
 ccaacagcca cttcaccgac cagcaccagc tgatgctgtt cggcgccagc aacgacagcc 300
 cgcaggacgc ggtgatgcag gtcacgggtg cgttcaacca cttcgccgcg gggctgggtg 360
 agcggatgcc gcgctgcgcg tacggcttct tccacgtggt gaacaacgac tacacgcact 420
 ggatcatgta cgcca 435

<210> 3419
 <211> 432
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-018-Q1-E1-E5
 <400> 3419

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 gtcattgttt ggcagaattc ctccaaagtc aatcactgac aaggagatgc ataaacgcca 120
 agacatgctt tccagtttga agtctaaagc caagcagatg gcgacaagtt tcaacatgtc 180
 aaacttcgct aacagggagg atctgcttgg tcaaagtaaa atgccagatg acatgagcag 240
 agttgctggg ttagataacc aaggaattgt tggccttcag aggcaaatta tgaaagagca 300
 agatgagggc ctcgagaagc tggaagagac agtgctgagc acgaagcata ttgcattagc 360

agtcaatgaa gaacttaccc tgcacacaag attgatagat gaccttgaag atcatgttga 420
tgttacaaat tc 432

<210> 3420
<211> 131
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E6

<400> 3420

ccacgcgtcc acggacgcgt ggggctagaa tggacagggga tatcgtcgat ctgcaacgcc 60
caaattctgg atggatgctc cggtgaactg aaaccttttg ctgtaaaaaa gttctctggg 120
ggttggagtg c 131

<210> 3421
<211> 220
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E7

<400> 3421

ccacgcgtcc gcccacgcgt cgggcaagat gcatgtttgt tttagggact aatttttagt 60
cccttttttag ttccctaaact accaaacatg ccctaagatc acgtgcaagt attttagcaa 120
tccccctaac cccttccttt tcttttctct ctgatcttcc tctgatgcag aggttgaaga 180
tacaaatttg tcaggaggtt ctcagacctt cctttgtgtt 220

<210> 3422
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E8

<400> 3422

ccacgcgtcc acgcgggtccg tgcaccggca gcgctaccgc atgggggtcg gctacaaggt 60
cgcgcccgac ggcacgacca cggagaagta ctgggagccc gtggaggagg acggcgagca 120
gcaggcagga agggcaggca ggacaggaa gccgtaccgc gtcgagctcg tcggcatcat 180

ctgcgacgcc tacctcgccg tcgtcagggg catcatgcga gctatcatat ccgggagagc 240
cgtgcgggtg aactcgagc tcaagtcgca caagcgcttc gccggcgcggt tccgcaagta 300
ctgcgacctc gtggacaacg ccaggtctta cagcaccaat accatcgccg gcgcaaagct 360
gatcgggttg aaggacaatg acaaccggct actggtggac g 401

<210> 3423
<211> 240
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-E9

<400> 3423

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aaggacctcg ccgaggaacg ggcggcgggtg ctccgcgcca gcagcaaggt ctccgacgcg 120
gcgttcgggg tgccgcgcgt ggctcctggt gtcgagaccg ccaacagcaa cgggtgccgcg 180
cgcggcagcg ttgaagtgga agatatcaac cgcgggccac taacaatgcc aaccgaagt 240

<210> 3424
<211> 309
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-F1

<400> 3424

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actggcttgc ctggtctgat gatgaccttc cttttgcatg catgcatggt atctcatcct 120
tgatgatgat ctagctcact agttcttttt aatttcgcgt tcattcgctt ttccaaattc 180
gattgtgttt cagccaagtt gtttagcggg acatctcttg tctgatcttc ctgctaaata 240
gagttggact cctatatata gaggccttcc ggcacatata atatacgtcg gaccaatatt 300
attgtgatc 309

<210> 3425
<211> 491
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-F10

<400> 3425

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gtccaccatg gcgcagcgag cgggtggccac gatgacgact aataagcccc tcctcctcct 120

cgccctggcg tccgcgctcc ttggtgcggc gccggccgcc gcgaacgcgc ccggcggggc 180

gttcagcaac tgggtggcga tgaaccagca gagctacgcg ctgtacgcgc agaagtccgt 240

cggggacggg ggcaatgagc ccctggacaa gaagctgtcg gaggcggaga agaagaaggt 300

cacgtacgtg gtggacccca tcggcacggg cgactacacc aacatcacgc cggggctgga 360

ggatatcccg gtgagcaaca ccaaacgcgt gatcctggat ctcaaggccg gcgctcattt 420

ccgcgagaag ctgttctga acatcagcaa gccgttcaac acgtgccggg tcggctccaa 480

gaaagccgcc g 491

<210> 3426

<211> 202

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-F11

<400> 3426

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ggcgtgggtc tacgcgcac acggaatata tgtgggcgat gataaggtga tccatttcac 120

aagaggaaga cgacaggagg tcngaacagg aactgtcctc gatattattc ttgtgagttc 180

cacccccaaa cgaagcaaca cg 202

<210> 3427

<211> 498

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F12

<400> 3427

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 gggcaggaag accgaagacc gagccgtgcg ggggctcggg acgggaacgg gacaggacct 120
 caaaatctca gatccttctt gcccgccgcg ccgtgcccggt cgacgcgtcg ttcttgccgg 180
 ccgcgccccca cctccgccct ctctctctcc agggggatcg gatacgccac aggctgcgcg 240
 atgggtgctgt ggggtcttcgg ctacggctcc ctcatctgga accccggctt cgacttcgac 300
 gacaaaatcc tcggcttcat caagggttac aagcgcacct ttaatctcgc ttgcattgac 360
 cacagaggca caccggagca tccggcgagg acctgcacgc ttgaaaccga cgaagaggcc 420
 atatgctggg gaattgcata ttgtgtcaag ggtggtccag aaaaagagct aaaagcaatg 480
 cagtacttgg agagaaga 498

<210> 3428
 <211> 361
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F5

<400> 3428

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 ggggtggtgaa taattgaaga agaagaagag gcggagactt gagcagggtga tgtcttcgct 120
 gccaggaggc ttctgtgctg tgcgcgtcct gcgcgggatc gacctcgta gctgcgacgc 180
 caagggcagc gaccctacg tcgtgctcag cctggatgga cagaaactga tgacgagcgt 240
 gatgaagaag acggtgaacc cgttgtggaa cgaggacctc accttggccg tcatggacgc 300
 gtcggcgccc atcaagctag aggtcttcga taaggacacg ttcagcaagg acgacatgat 360
 g 361

<210> 3429
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-F7

<400> 3429

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ccccaacccc aacctaagct atttggtttc ggatctgacc ccaaaaacgt ggagctcaga 120
 gcattggtgc ctctttcctc tttcaccaag gattccggtg ccttatttca caagacaaaa 180
 aaagtctcaa gggctcttgat tcttgatatga actcaagatt tatggtggat cttggagctg 240
 tgggatgcta agcctggtct agctactaga ttatgaactc tctgctgac taatagcatt 300
 tctacaagaa ttcttttgct ggaagggtta ttagttattt gcaacaatga aggaacatct 360
 aatgcttaat attgatgacc taagcattct tgagcctaac gaggtcattg ggacagtcaa 420
 gaataaatca tct 433

<210> 3430
 <211> 440
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-F8

 <400> 3430

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 gagcacgagt ttgatgctcc agacgacgcc tacatccttg acgcagccga gactgccggt 120
 gtggagttgc cataactcgtg ccgtgctggg gcttgcctca cctgtgccgg caaaatcgag 180
 tctggttcgg ttgaccagtc ggatgggtcc ttccttgatg acgggcagca ggaggaaggt 240
 tatgtgctga catgcgctct ctacccaaag tccgactgcg tcatccacac ccacaaggaa 300
 ggcgacctgt actanggcta gggctttcca atttggcgag ggacaaaaaa tgctctcgag 360
 tgggtgtgtg tcaagcaaag ctctccatc tgcgcctac ccggttgtgc gaactgtttg 420
 gcatcaaact tgtgtgggtg 440

<210> 3431
 <211> 458
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-F9

 <400> 3431

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 cggatgatggc gcgtacaggg cttcccgcgc gcgatctcag ggtactcgac ccgttactct 120

cgtacccgctc cacgatcctg ggccgcgagc gcgccatcgt cgtcaacctg gagcgcgctca 180
aagccctgat cacagccaca gaggtgctgc ttccaaacac caaggatccc gcctttgctgc 240
gcttcgtccg cgacctccag acccgtgtcc tcgcatcttc gtctgacgag gcagctgagt 300
tcactgacat ggaacgtgaa tcactaatag ttgcttcacc atttccccta ccaagtgcac 360
ccagaggaca tgaaatggag atgactaaga agactactgc tgttgtgcct gagatgacta 420
gtagcagcag tatgcccatt ttagctattg caaaagat 458

<210> 3432
<211> 223
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-G1

<400> 3432
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cctggtagca ccatgacacg atggcccggt cgtattttct ggcttgctcg tacttttcag 120
ttccatgggt ttacaacacc ttttactccc agcagaaaat acataatatg catgtactcg 180
actttttttc tatagtaata taaacaaagt ttcacatgtg ttt 223

<210> 3433
<211> 85
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-018-Q1-E1-G10

<400> 3433
gacccacgcy taagtttttaa gtgacaccaa tttagaaggg aattagagtg gattaaattc 60
gctcccggtg aaaaatgact cgaag 85

<210> 3434
<211> 71
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-018-Q1-E1-G11

<400> 3434
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 ggttccccca a 71

<210> 3435
 <211> 94
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G12

<400> 3435
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 cctcctgggtc ctcttctgca tcgtgcatgg tgag 94

<210> 3436
 <211> 291
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G2

<400> 3436
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 ctaataaaac tctcaccgcc gccatccgag agaacaagcc aaccgacccc gtccccaagg 120
 caatccgtcg ccgacgtacc accgccaccg caggagcgag atggagatga agaggatcct 180
 cttegcgcgc ctcgtcgta tcgccgcctc ggccaccgca gtgctggcct ccaccgatgc 240
 cgccgcgcgc ggcgccccaa ctgcctccga gtcgtccgcc gagggctccg c 291

<210> 3437
 <211> 460
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-G3

<400> 3437
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 cctcttgcag aaacgaggaa agaaaacatg tcttctcgct gggtagggc ggaggtgtac 120

ccgctgttcg cgacgacagg ggtggcggtg gggatctgcg tgatgcagct ggtgcgcaac 180
atcaccacca acccgaggt gcgggtgacc aaggagaagc gggcgccgg ggtgctggac 240
aaccacgacg agggcgggcg ctactcgag cacggcgtgc gcaggttctg gctctccaag 300
cgccgcgact acatgcaggc catggacaag gtgcccacgg accctaataa gtagacgacg 360
acgatatacc ccaatgcatg gcaagaagat atatatatca gcacaacgca actgcatgcg 420
atgctgcttg ttgctgcaat taatccacta tactatatac 460

<210> 3438

<211> 412

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-G4

<400> 3438

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cgtctccaac ggcacttca cgaggcacga ccacgttatg ctgttcgggg ccagcgacgc 120
cgcgctccaag gacagggaga tgcaggtcac cgtcgcttc aaccacttcg gcaaggggct 180
ggtgcagcgg atgccgcgct gccgtcacgg cttcttccac gtggtgaaca acgactacac 240
gcactggctc atgtacgcca tcggcggcag ccggaacccc accatcatca gccagggcaa 300
ccgcttccgc gccgtcgacg acagcaggtt caaggaggtg accaagcggg agtacacgca 360
gtacagcgag tacaagaact ggggtgtgaa gtcgcaggac gacctgttcc tc 412

<210> 3439

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G5

<400> 3439

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gcttccgctg ccctgaggtc ctcttcacgc catccttcat tgggatggaa gctgctggta 120
tccacgagac cacctacaac tccatcatga agtgcgacgt ggatattagg aaggatctgt 180

atggcaacat cgtcctctcc ggtggtacca ctatgttccc tggcattgct gacaggatga 240
gcaaggaaat caccgccttg gctcctagca gcatgaagat caagggtggt gctcctccag 300
aaaggaagta cagtgtctgg attggaggat ccatcctggc atcgctcagc accttccagc 360
agatgtggat tgccaaggct gagtacgacg agtctggccc gtccatcgtg cacaggaaat 420
gcttct 426

<210> 3440
<211> 277
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G6

<400> 3440

ccacgcgtcc agctggttcg tggatggcgg cgccacaggc tctcctgact atcgctgctg 60
gtcgtcgtgc tagctgtggt cgccgttgtc gcaaacgtca gtcacaccaa gcctctgact 120
cctgacgggc gcatggtaca ctacatccac agcaacttca tggacggggc gtgggatccc 180
tctcacacga tcttctactg cggtcgggac aggtcctgca ccacggattg ctcatacggg 240
taccatggca ctcacgcgca tgggtacgag ctgcata 277

<210> 3441
<211> 428
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G7

<400> 3441

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caatcagcta aatgctaacg gaaccttgcc tttccaaaac tggacaaatc tttatcaaaa 120
tcctgggtcg actccagcag cagcacagaa tgggtgccacc aaggttgcta acaacaatca 180
ggacttctct tctggtacct tcggttttgg cacacctggg gtgtacaaca ttagcccagc 240
tgtcccagca aatggggcca cgacagcagg tgctatcaac aacggcactg catcaactgc 300
ctcttctact ctcccctcac aatctggcaa agactatgat ttttcgtcgt taactcaagg 360
atttttcacc aaacgatgag cgcctagtga gcttgaaaac caagcagacc acaggatcat 420

gttggacg

428

<210> 3442

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-G8

<400> 3442

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tgctcatcgg ttttgctgc cgggtgggga ccgcctgcac gagcagcggc tagccagacg 120
tacgggcttc gtttgaggct ggagtcctga ttggcagggtg caagcacaga gctcgatcgc 180
catgtctttc accggcacgc aggacaagtg caaagcctgc gacaagacgg tccacatcat 240
cgacctctc accgcccagc gcgtctcgtc ccacaagaca tgcttcaagt gcagccactg 300
caagggcgtc ctctcgatta gcagctactc ttccatggac ggcgtcctgt actgcaagac 360
gcactttgaa cagctcttca aggagacagg gaccttctca aagaactttc aaggtggagc 420
atcttcaaac aagaacgacc aagca 445

<210> 3443

<211> 452

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-H1

<400> 3443

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tgagtatgca actaggggat cattgcatga tctctccat ggtaaaaagg gtgtcaaagg 120
agcccagcca gggccagtc tgtcatggat gcagcgagct aggattgccg tatgtgctgc 180
tcgggggtctc gagttcctcc acgagaaggc cgatcctcga gtgggtccacc gcgacatcaa 240
gtcaagcaac atactgctct ttgacctga tgttgccaag atcggggact tcgacatctc 300
aaaccaggcc cctgacatgg ctgcgcgcct ccactctact cgcgttcttg gcacctttgg 360
ctacctgca ccagaatatg ccatgactgg acagcttagc acgaagagtg atgtctacag 420
ctttggagtt gtgctgctgg agcttttaac cg 452

<210> 3444
 <211> 409
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-H3

 <400> 3444

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 tccgccagcc tcgctaggag aagcctgctc atggcgccctg gcggggccacc acctccacca 180
 cggctgctgt gcctagtgtg accccaagca aggctagtct gtttctgtgt atacaatacg 240
 actgaaaaac taggagaggg gggattcggc caaggcggcc ggtgctctct cctctcctcg 300
 tagctagttt ttctcctgtg tccagctcag ttcttggtca tccagccgtg ttaggaaaac 360
 aaaccagcc ccgtgcccat gttgttgaag aatatattag tctggttat 409

<210> 3445
 <211> 453
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-018-Q1-E1-H4

 <400> 3445

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 accgcacaga ttcagaattt ctgaaagctg atagcactca aactcgagat gctgggtcaa 120
 ctgcctcaac agctattatt gtaggtgatc gtttgcttgt tgcaaagtgt ggagattcta 180
 gagctgttat ttctaaagga ggacaggcga ttgcgggttc aagggatcac aaacctgatc 240
 agacagatga gaggcaaaga attgaggatg cagggggcctt tgttatgtgg gctgggacat 300
 ggagagtggg tggcggttctc gctgtctctc gagcatttgg tgataaactc ttgaagccgt 360
 atgttggtgc tgaccctgaa atcaaggang aggtgggtga cagctccctc gaatttctca 420
 tccttgctag cgacggactc tgggatgttg tca 453

<210> 3446

<211> 435
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-H5

 <400> 3446

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 gatgggacga aatctgcagt gaagaagctt gactccagca aacagcctga tcaagaattc 120
 cttgtgcagg ttccagctgt ctcaagattg aagcatgaga atgttggtcca actcgtcgga 180
 tactgcgccg aagggagcac ccgcgtcctt gcttatgagt atgcaactag gggatcattg 240
 catgatatcc tccatggtaa aaaggggtgc aaaggagccc agccagggcc agtcctgtca 300
 tggatgcagc gagctaggat tgccgtatgt gctgctcggg gtctcgagtt cctccacgag 360
 aaggccgatc ctcgagtggg ccaccgcgac atcaagtcaa gcaacatact gctctttgac 420
 catgatgttg cgaag 435

<210> 3447
 <211> 429
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-018-Q1-E1-H6

 <400> 3447

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 gtgggtggcaa atagcctaata cggaagtgtg ttatcagact acttctgggc tctttctgtt 120
 gtttggaacta ctcccttggg ggccactcta ggcattgtct tcacaattcc aatagcaatg 180
 gttgctgata tgatcattca cggccgtcac tattcagcag tatatatctt tggttctgtc 240
 caggatatttt caggctttgt tatecggaac cttgcagatc gcttttctcg ttctctaggg 300
 ctatcatagt ctcataaaac agaacaggcc cttattagag cgtgcatcag gaagctccaa 360
 ggtcgggttg gttaggccaa tacttcagaa aacctggatc gggagatacc aggaattaat 420
 ttccctttg 429

<210> 3448
 <211> 439
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-018-Q1-E1-H7

<400> 3448

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tggttttgac atgttcccaa cattactagt tacagatgga tcatgcatga tagacaggag 120
gatgggaata catgggcac cttctgaaat ccaagcttta ttctactctg ctttacgatg 180
ctcacgagaa atgcttgctg tgaatgatgg atcgaaaaac ctcatccgtg ccattaataa 240
caggctcagt gcattgtcct ttcacatcag agaataattac tgggttgaca tgaagaagat 300
aaatgagata tacagatata agacagaaga atactcacat gatgccacta acaaattcaa 360
catttaccct gagcaaatcc cttcctggct tgttgactgg attcctgaga aaggaggtta 420
ccttatangg aatctgcag 439

<210> 3449

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-018-Q1-E1-H8

<400> 3449

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agcggctagc gatctctagt ttatattaca attaggagca agcgatccaa ttatcgatag 120
agcgcgagat cgategatca tgccgggccc ctcgggtggc tccatcctcc tcctcctcct 180
ccatggcctc ctctgcctgc agctggctgc cttggccgag atggacgacg acgacgtcat 240
ggaggacggc agctgcatgc atttcagtgt gtcacggccg cctgctccgc cggaggacgc 300
ggatgagcgg cgcgactatt tccgcgccat gcatgccaaag gatctgttcc ggcaagagca 360
gatgatcacg atgatgggca gcgaccggaa ccgtagcatc atgacggggc gggcgaagga 420
gtcctccaag ctgccggggg tcaactgtcg c 451

<210> 3450

<211> 344

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-018-Q1-E1-H9

<400> 3450

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cttctcatca cgctcgtgct ggaggccgcc cctccggcga ccgccatgga ctgcaaggcc 120
gggtgtgacg aggtcacggg ccactcgcac atgaacatgg aggactgcat gaagaggtgc 180
aaggagatcg ctgctaagca agggcctagg gacccttaca aggataacaa acttgacatc 240
ccatgaacta nttaatgctc ctatatcatc tgcctatcca tgcattgcatt gcattgcgta 300
tgcacactgt gcgtgcctgc ccacaaagtt cgacaacaca ccga 344

<210> 3451
<211> 395
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A1

<400> 3451

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gcccttttcc tccgacatcc acaagggggg aggggaaaac acgtacattc acccggcggc 120
aataatggcc tcggttccgg ctccggcgac gacgaccgcc gccgtcatcc tatgcctatg 180
cgtcgtcctc tcctgtgccg cggctgacga cccgaacctc cccgactacg tcatccaggg 240
ccgcgtgtac tgcgacacct gccgcgccg gtctcgtgacc aacgtcaccc agtacatcgc 300
gggcgccaag gtgaggctgg agtgcaagca ctccggcacc ggcaagctcg agcgcgccat 360
cgacgggggtc accgacgcga ccggcaccta cacga 395

<210> 3452
<211> 398
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A10

<400> 3452

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gataaacgat catcctgttc cagaggaaga gataaagatg ttgttacaag cgggcgatat 120
 acatggaact gacacattag attgtgagga atttgtgaca gtcttgcttc acattaaaaa 180
 gatgagtaat gacgagtatc tacctaaagc tttcgagtgc ttcgacaaag acgggaatgg 240
 ttttattgaa atgtccgagt taatggagac tctaagtgat ggtgaactaa agcctgatga 300
 gcaattgggtt aacgacatta ttcaagaggt tgacaaggat aaggatgggc gcatcagtta 360
 cccagagttt gaattgatga tgaaaagtgg atcggact 398

<210> 3453

<211> 358

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A12

<400> 3453

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 agagctagct accgacgaag acaaggcggg caatggccaa ggcgcccctg ccgcttccgt 120
 cgctgctcgt cctcgccgcc ttcttcttcc accacccctg ctgcacggcg cacggccgcg 180
 ccgaaaacat ctcgagggtc taggcgcggg tccgcgcccgc cgcgtccgag ctgctccgcc 240
 acgccaccag ccagctcgtc gacctgcccc tcccgcccaa cctctccggc gcggggcgtcc 300
 gggcctcggc cctcagcgtg cgcaacaacg cgctctgggc cggcggcgtc aacaccaa 358

<210> 3454

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A2

<400> 3454

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 gcatcatggt ggacgtctgg tggggcatcg ccgaggccga cgggcccggg cagtacaact 120
 tcaacgggta catggagctc atggagatgg ccaggaagac cgggctcaag gtccaggccg 180
 tcatgtcctt ccaccagtgc ggcggcaacg tggcgatgc agtcaccata ccacttccgg 240
 gatgggtctt ggaggagatg gacaaggacc aggacctggc ctacaccgac cggagtggcc 300

gccggaacta cgagtagctc tccctgggct gcgacgcgat gccctgtctc aagggccgca 360
 ccccatcca gtgctacgcc gacttcacgc ggccttccg cgaccacttc gccaacctca 420
 ag 422

<210> 3455
 <211> 377
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-019-Q1-E1-A3
 <400> 3455

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 cttctgcacg gtgcatgggt agaaggaaga gtcaaagggc atcgatgcga aagcgcccg 120
 gcctgtgtgg tcttcgaca tcaccaagtt gggcgctcc ggcaatggca agacagacag 180
 cacgaaggct gtgcangagg catgggcatc ggcgtgcggc ggcactggga agcagacaat 240
 cctcataccc aagggtgact tcttgctcgg acaactcaac ttcacaggcc cttgcaagg 300
 cgacgtgacc atccagggtg atggcaatct gctggcgacc acggacctaa gccagtacaa 360
 ggaccatggt aattgga 377

<210> 3456
 <211> 403
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-019-Q1-E1-A4
 <400> 3456

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 atcatgggtg acgtctggtg gggcatcgcc gagggcgacg ggcccgggca gtacaacttc 120
 aacgggtaca tggagctcat ggagatggcc aggaagaccg ggtcaagggt ccaggccgctc 180
 atgtccttcc accagtgcgg cggcaacgct ggcgattcag tcaccatacc acttcgggga 240
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 cggaactacg agtacgtctc cctgggctgc gacgcgatgc cgtgtctcaa gggccgcacc 360
 cccatccagt gctacgccga cttcatgcgc gccttccgcy aac 403

<210> 3457
 <211> 392
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-E8

<400> 3457

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aatggccttc aaggaaacag ggagtttctg gttgagggtc taatgcttag tctgttgcac   120
catgacaatc tagtaaacctt aattggatac tgcgctgatg gagaccaacg tcttcttgta   180
tacgagttta tgccattggg atcacttgag gatcatttgc atgatattcc acctgataag   240
gaacctctgg actggaatac acgtatgaag attgctgctg gtgccgcaa gggcttagag   300
tacttgcatg ataaggcaag tcttctgtt atttacaggg atttcaagtc ctcaaacatt   360
ctactcgggtg aagggtttca tccgaagcta tc                                     392
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<210> 3458
 <211> 402
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F1

<400> 3458

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cgctctatct ctttcgccga gtcctcgaa accctaagag cgtgcttgac cggcggccgc   120
gaggtgatgg cgatggacct tgacgcggta gcgaacgcct tcgtggagca ttactaccga   180
acgttcgaca ccaaccgcgc ggcgctgggtt gggctgtacc aggagacctc catgctcacc   240
ttcgagggcc agaagttcca gggccctcc gccattgccg gcaagctcgg atctctccct   300
ttccaggcct gcgagcatca gatcgtcacc gtaaactgcc agccatcggg tccccacgga   360
agcatgctca tcttcgtcac cggtttcaaa cgcaacgggc cc                                     402
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<210> 3459
 <211> 87
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F10

<400> 3459

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gctcgcgagg cccccgcttc tccgctc 87

<210> 3460

<211> 399

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-F11

<400> 3460

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gcgccgacaa ggggtggcgat ccgaggcccg tgagctacca ggtgcgcagg ccgcactctg 120

gccgcgcccc cggcgctctc tacttctgct ataagttcac cgagggtcccc gccgtctctt 180

gtgtctcgga accggaaagc aaacaagtcc agtacgcaa gaagtacgtg caggactcca 240

agaacacgac ggacaagact atggtgccgc ccaccgtgta cccaccgccg caggccatgg 300

cgcccgcata cccgccgcaa caatattgtt cgccgtacgc ggcgtaccgc cggcagcctt 360

acgggtaccc tgctccgcca ncgtacgggt acaatgctg 399

<210> 3461

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F2

<400> 3461

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gcctcgacgc ataccagttg actccacact gctgcatgac catcatagcc atgtgacacg 120

gccaacagcg tggcttagtc atataaatgt gacgtaatac ctcgatcaa tgtccacgaa 180

caaggattct acatacgtg tcgcctagat ggctgctgtg gccgaccgct gtattcacta 240

cgaaggtgaa ttccgtctca tcatgaacat catcgtcaat gcactgattc ccttgccgca 300

caaccagtct ggcaatcgcc ctatcggctc gtcaactacc atgctgccga gcgatccgga 360
ctgtgatttc tc 372

<210> 3462
<211> 405
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F5

<400> 3462

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cgtgtcctgg aggtcaccct ggtgtcggca aatgacctca agaaagtgtc gctcttctcc 180
cggactcgca tctacgccgt ggcttccatc tccggattcg acctccgcat ccttccccac 240
agcaccocaag cagaccacag caacggctgc aacctctgct ggaacgccgt ggtacacttc 300
cccatcccgg ctgccgctga ccccgcggc ctgcactcc acgtgaggct ccgcgcccag 360
cgtctatacc tgggcgatcg cgacatcgga gaggtgtttg tgccc 405

<210> 3463
<211> 342
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F6

<400> 3463

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tgggtccacca tggcgcaccg agcgggtggcc acgatgacga ctaataagcc cctcctcctc 120
gtcgccctgg cgtcggcgct ccttggtgcg gcgccggccg ccgcgaactc tcccgggtggg 180
gcgttcatca cttgggtggc gatgattcag cagagctacg cgctgtccgc gcagaattcc 240
atcggggatg ggggcactga gcccttgga cagaagctgt ctgacgcgga gaagaataag 300
gtcacatacg tgggtggaccc gagaggtact ggctactaca cc 342

<210> 3464
<211> 392
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-F7

<400> 3464

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aaaaagggtac aagcaaagaa accttaaacy tgccatggaa cacacgtccc caatggggct 120

atcgttacca tttcaacata cagcaccatt ttctacacac aactttgagt gaagatttat 180

cggacacagg tggtaatcgt ctgacatgtc ctgagatata cggagactga tggtgccagg 240

ctagtggggtt gagtacagga tgagcgcaac cggtagtgtg tatatcacgt tctttgtact 300

caagaatttt gtacagacag aaggcgggtgc ggatagcatg ccttgcatac ataataattt 360

caatacaggt tgaaaacttg aaatcaacac aa 392

<210> 3465

<211> 371

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G1

<400> 3465

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gggggggaggg gaaaacacgt acattcaccc ggccggcaata atggcctcgg ttccggctcc 120

ggcgacgacg accgccgcgc tcctcctatg cctatgcgtc gtcctctcct gtgcgcgggc 180

tgacgaccgc aacctccccg actacgtcat ccaggggcgc gtgtactgcg acacctgccg 240

cgccggggttc gtgaccaacg tcaccgagta catcgcgggc gccaaaggta ggctggagtg 300

caagcacttc ggcaccggca agctcgagcg cgccatcgac ggggtcaccg acgcgaccgg 360

cacctacacg a 371

<210> 3466

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G12

<400> 3466

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tccatgtgag ggttgaagca aacaaagatg agggtgacgc agagataaca cagctattta 120
tatcatatag aggggtattgt gtcgtaaaag ggatgcatct gaaggagttg atcttggtatg 180
gcaactgacat ctccaaagca ataattgact atgccactag caatgccatc acagacattg 240
tcgtcgggcgc atcaactaag aacacattca tcagaagggt tagaaatccc gatgtcccaa 300
cgtgtttgat gaagatggcg cctgattatt gcacggtaca tgtcatccac aaggcaaaag 360
ccatccaggt gaaggcagcc aaagctcctg caccctttgc tactctccct ccaaagcaac 420
actcgcaacc aaaca 435

<210> 3467
<211> 396
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-023-Q1-E1-G2
<400> 3467

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gcagagcgtc aaagggttat cgagtgcggt ggatacatcg aagatgggta cctcaacggc 180
gtactctctg tgacccgggc tttaggggac tgggacatga agctgcccc aaggctctccg 240
tcgcccctta tcgcagagcc agagatccac tggaccaccc tgacggaaga cgacgagttc 300
ctcatcatcg gctgcgatgg gatatgggat gtgatgagca gccagcacgc ggtgagcacg 360
gtccgcaaag gcctccggaa gcacaatgac cccggc 396

<210> 3468
<211> 377
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-023-Q1-E1-G4
<400> 3468

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aagcctgcgt gcccttcatt ctctctcgtc tcgatatcga cgacgctccg ttcggctccg 180
gcaaaccaca tcaagtcgcy atggacatga ataaggtcgc ctgcgccgctc ctcgacgttg 240
ctgactctgc cactgtggtc atcaccgcag acgcatcggc gtccgcctac agcaaagggt 300
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cctactacct tcagtaa 377

<210> 3469
<211> 375
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G6

<400> 3469

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gtccttccgc cctatcgcgc atgccgatac tttctaccag catatatgga atccctccgc 120
tggtgtcttg ctttttccct cgggtctggg gcaggagttc ctttctcctc cttggctcca 180
ttgtcgctcc ttccttttct tcgtaccccg atttctcttg ctttgtttcc ttgtcgctcg 240
tgcaccggat ccatgtgtgt tggctcatca tttgtattgt tcttgtccgt ccaactgatt 300
agagtttctg gcttggtaga agatcacccc gaccttgctt atcgccctcg gttttccgta 360
ttttttgata ttgag 375

<210> 3470
<211> 392
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-G8

<400> 3470

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ccacaagttc gacctcatgt acgccaagcg tgccttcgtg cactggtagc tcggtgaggg 120
tatggaggaa ggtgagttct ctgaggcccc tgaggacctg gcggcgctcg agaaggacta 180
cgaggaggtc ggcgctgagt tcgatgaggg cgaggatggc gacgaggggt acgagtacta 240
gagaagtttg ctgatgacgc agcatcaggg cagtgtgctg cccttatccc gtgatctgcc 300

gtgagttgct cctgctatcg tggtatgtgt gtctgttctg aagtattgtg tggtttacia 360
cacctgatgt tgtaagagtt gttaattccc ct 392

<210> 3471
<211> 385
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H1

<400> 3471

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ttcctggcgg cgggtgtgctt ctttgtctcg ggcgtcctct tcgtcccaga ggctatcggg 120
tccccatccg gcgcaggagc cgtcaccgcc gccaaagctgg cccacgtcct ctccctttgcc 180
acctcctggg gcgcgcgcct ctggggccacc ttcacgcggc gcatacataat gttcaagaac 240
ctgccgaggg acatgttcgg caacttgcag agcaagatgt tcccggccta cttcacgctt 300
atatctgcat gcgcagccat ctccgtcgcc gccttcgcgt accttcaccc gtggaagacg 360
gcgtccactg tgcagcgcta ccagc 385

<210> 3472
<211> 399
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H12

<400> 3472

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tcaccttcga ggccggcaag acgtaccgcc tccgcgtctg caacaccggg atcaaggcgt 120
cgctcaactt ccgcatccag ggccaactaca tgaagctggg cgagctggag ggctcccaca 180
ccctgcagaa cacgtacgac tcgctcgacg tccacgtcgg ccaactgcctc tccgtgctcg 240
tcgacgccga ccagaagccc ggcgactact acatggtggc ctccacgcgg ttcacccacg 300
acgccaaagtc cgcgtccgcc gtcacccgct acgccggctc cagcgccccg ccggcgccga 360
acatgaccga gccaccggcc ggctgggcct ggtccatca 399

<210> 3473

<211> 442
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-H2

 <400> 3473

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 ctgctcgaac aggggatgta atgacaaccc cttcccctgg aatgcatgtt gatgatgttg 120
 ctggttccaa cttcgttttc agtaataata acaacaaagc gaagaccctc ctacctaccc 180
 tatttgcttg agcggctctt gtccgcgcca caagatacca attggtgcgc tgggaatatt 240
 cagttacgat gaccgcgttt agttcagttt cttttttttg ggggttggtt cgatcatttg 300
 gctgtagcgt gaatcgcttg gacaacagac tccaattact aagcaaatat tttttcttct 360
 gcatatattt gaagaatctt gttcagggcc ccttttcaaa atgaacgcgg ggaatttttt 420
 ttttcttggt tccaatgtct tt 442

<210> 3474
 <211> 437
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-023-Q1-E1-H5

 <400> 3474

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 cagtcaagat gatgactcat attctgtcac ttcttcaact gtaacttcag caagagctgg 120
 gaaaactaag aagacaactg ttgctgttgc acctacattc gtctgtgcta atcgtgctga 180
 gaagagagga gagttttaca caaaattaga agaaaaacgc aaggcttttg aagaggagaa 240
 actccaagca gaggccagaa agagggaaga ggaagaagaa gctctaagac aactgaggaa 300
 gaacttggtc gtccgagcaa aacccatgcc aagctttctac caagagggaac cccacacaaa 360
 ggttgaactt aagaagggtg ctccaaccct tgcaagggtc acaaaattga cacggagaaa 420
 gagctgcagt gaaaccc 437

<210> 3475
 <211> 388
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H6

<400> 3475

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tcggtcgaag agtacgggct cacccggttc cgacattcac accgggggag aggtgatcga 120
ggggcatggg caccattccg gcgacaacct tcgcagtaat cataccggtc tgcttccgta 180
ccacgtgtgg tacagcagtc gacgacaatt gcactaacgg agtctttagt cgccacatgt 240
attgacgaca ctaggcgcg cggtgttcgt gaataatgtc atgcactaga tccatggcgc 300
gaacgtgaag gtggcgtgca agcatctcat cagcgggact gctcgagcgc tccatcgaca 360
gggtgatgga ctggaaccgt acgtacac 388

<210> 3476

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-023-Q1-E1-H7

<400> 3476

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cctccctcac caaataaggt cccgcccttt tccgacattc acagggggga caggaaatca 120
gcggccatgg cctcgattcc ggcgacgacc ttgcgcgtca tcttatccgt cctcttctgt 180
gccgcggctg gcaccgccgt cgacaacgac ctccccgaact acgtcatcca gggccgcgtc 240
tattgcgaca cctgccgcgc cgggttcgtg accaatgtca ccgagtacat cgcgggcgcc 300
aagggtgaggc tggagtgcaa gcacttcggc accggcaagc tcgagcgctc catcgacggg 360
gtgaccgacg ggaacggcac gtacacgatc gagctcaagg acag 404

<210> 3477

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-023-Q1-E1-H8

<400> 3477

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aactctccgg ccaccattga tccgacctcc cctaagccat ctatgagtag agaaaaacag 120
tgaacgccac ctctgtactc gccccacctt atggcgcgtc gctcctgcag taccggccca 180
cgctctgcgc ggtgctcagg tgttacggct gccctcaaat ccgtcgtcgg accattggca 240
ctggggcaag caaaagcacg gacaggtgct cggcgctgctg caacggcttc cgatttgccc 300
ggctagatga aagacggctg gggagcatct tctctgggga acaccgcgcg tcatgggtgc 360
cttgccgaag ttcagggacn gcgtgattgc tcatcgctgt tcatgctcca acgtggggcn 420
acccatctc 429

<210> 3478
<211> 57
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-A10
<400> 3478

cccggttcga cccacgcgtc cacagaatca agaaacatct tggaatgtct gtataag 57

<210> 3479
<211> 366
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-A3
<400> 3479

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ctacactaca ttagagagag gtcgagcgcc cctcctccga tccgccggcc cgccgagagc 180
tagctgctga tcggctcagg agagtcatgg cgacgtcgac gatgctcggt gccgccggcg 240
tgctgctggt cgtgtcggcg ctggcgacct tggccccggc cgaggacccc tacctgttct 300
tcgagtggaa ggtgacgtac gggagcaggt ccctgctggg agtgccccag aaggtcatcc 360
tcatca 366

<210> 3480
 <211> 315
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-A9

 <400> 3480

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 agtcggtgga gaagacctgg agcttgctgc cgaggccctt ggcgaagacc tcggcggtga 120
 acatccgcgc gtagccgtgg atccgcctcg tcacgggcca cacgcacacc accgggttgt 180
 cgggcctggg cgtcaccgtg ttctccaccc ggtacaagaa gccgcggccc gccaccggcg 240
 gctgctgccc caggaacttg aggttgcgct cgaacttggc ctccggcagg tccgtgtcga 300
 ctcagttgtc gatga 315

<210> 3481
 <211> 391
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-B12

 <400> 3481

 acaataccct atactgagtc gtcttagccg ggtggatgtt catcatgacc accttcatcg 60
 ccctcttccct gccggagacc aaggggggtgc ccatcgagga gatgaacctc gtctggagcc 120
 gccactggtt ctggggcaag tacgtcaacg tcgacacaca acacggcggc gccagcccga 180
 gatccaacgg cgtctgatct gagcaagctg cagcaacacc tcggcacctg acctggccat 240
 gcatgcacac gtatactata atctaacaac gtagctgacc tgggcaaatt gccagcctga 300
 caggggccag ggtgctcgaa tgtctcactc tcaccgccga ctaactttcc atcaaaattg 360
 attcttggtc atactccata gcatgcacag a 391

<210> 3482
 <211> 435
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-B2

 <400> 3482

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 tgcaggtgct ggtggcgggtg gcactatcat ttctagtagg cgggtgcctgg tgtggctctc 120
 ccaaggttcc cccaggaaag aacatcacag ccaactatgg tagtgattgg ctagatgccca 180
 aggcaacatg gtatggcaag cctacaggtg ccggccccga cgacaatggt ggcggatgtg 240
 ggtacaagga cgtgaacaag gcccctttca acagcatggg cgcattgtggc aacgtcccca 300
 tcttcaagga tgggtctgggt tgtggatcct gcttcgagat caagtgcgac aagccagcgg 360
 agtgctctgg caagcccgtg gtggtataca ttacagacat gaactatgag ccattttgcg 420
 gcatacactt cgacc 435

<210> 3483
 <211> 445
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-B6

 <400> 3483

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 tgggggtgata ctggtgaagt aaatacatgg gttagtgcata atggtaaaaa tggaatgcgt 120
 anggattggc atatacgtga ttctatgaca ggccacacaa tactgaaggc gacaagtaaa 180
 tgggttatga tgaacaaact cactaggaag cttgcaagaa ttccagatga agtgcggact 240
 gaaatagagc catactttgt tgggcgttct gctattgttg atgaagacaa ccgcaagctt 300
 ccaaaactgc cagaggggtca aagcacttct gcagctaaat atgtgaggac aggcctgact 360
 cctcgttggg ctgatcttga tataaaccag catgtcaata atgttaaata cattgcgtgg 420
 aatcttgaga gtgcaccgat tacta 445

<210> 3484
 <211> 422
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-C11

 <400> 3484

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 cgcgccctgcc caaatccacc catcccttcc gttcaagccg ccggagctcc catgccgctg 120
 gtgtcgaagc cggcgctccct tccttacagg cccgcctcct ctctgtccgt tctgtcttgg 180
 tcgacgaagc tcaagaccac agtgtcagga agctctccag atcttccagc caaacacaaat 240
 tcatcagtca gatacacttt taccaaggaa tttttcagaa tcaactccag agaggttcag 300
 ctctcgaagc tagagaacca gagctctacc aaacaggcca ggacgtctct caaatcccca 360
 gttcagtaac tggctaactg taggagaatg agagagatgg agaacggccg cgctaaacgc 420
 ga 422

<210> 3485
 <211> 387
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-024-Q1-E1-C12
 <400> 3485

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 tcgccgccgc cgcattgtgca tctcggcgaa tccgcctgcg gagaccaagt tagcgccagg 120
 gacgtttgtg ggggcaaccg tgcattccatt ccctaccggc gattggggct ggaaggcggg 180
 gtggcggtgg caattcttcg tcgaagatcg cgcttcgctg tgaagccgct cacatccgcg 240
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 ggaggatgct gcgatgtgtt cgtgagagat ctaggtcgtc gtctcccagt caactgtggg 360
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<210> 3486
 <211> 456
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-024-Q1-E1-C2
 <400> 3486

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ccgcggggcg cgggtgtccg tggccagctt cggcggcgcg ggcgacggac ggacgctcaa 180
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gacgctcttc ctgcgcgcgc ggcgcgtcat ccgcgccacg caggacacat caagctggcc 360
tctgattgaa ccgctgcctt catacgggag aggacgtgag ctgcccggcg gaagatacac 420
aagtttaatc catggcaatg ggcttcagga tgttgt 456

<210> 3487
<211> 449
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-C6

<400> 3487
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ttcgtcattg ctactctcct cttcgtcgc atggttgtgg caccgatggc cgaggcaaag 180
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cctagcggac cggcgggtgc acctggtccc caggcgcgtc agggctctatc gggcaatgag 300
gacgacgatg atgactccac caactaaggc caagcacgtc ggtccggttg catttggaac 360
aagacatgga agaaaagtga gagcaatgtc gtttaaaaac aaaagtccat aataatgtgt 420
ggcatccgt gatatgttct tgctctccc 449

<210> 3488
<211> 440
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-C8

<400> 3488
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gggcacgctg ggctacatgg cgcgggaggt gctgcagggg aagccgtacg accacaagtg 120
cgacgtgtac agcttcggca tcctgctctg ggagacctac tgctgcgcca tggcctaccc 180

caactacagc ctcgccgaca tctcctacca cgtcgtcaag ctgggcatcc ggccggacat 240
cccagagtgc tgcccgcggg cgctggtgga gatcatgacg cgggtgttggg acggcaaccc 300
ggacaaccgg ccggagatgt cggaggtggt ggcgctgctg gagaagatcg acaccagcag 360
cggcaagggc ggcattgacgc ccgtcgacga cgtcgcgcag ggggtgctcct gcttcggctt 420
caaccaccgc agcgtcgcct 440

<210> 3489
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-C9

<400> 3489

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ggggggcgcc gtacaagaac cgcaccgtcc agcgcgcgaa cccgcacgac gagttccgca 120
tgatggcctg cttccacagc acgcgaaaca tccccaccat catcaacctg atggagtctt 180
cgcgcggcac gcggaagcgt ggcattaccg tctacgccat gcacctctg gagctctccg 240
agagatcgtc cgccatctgc atggtccaca aagctcgtcg caacggcatg ccgttctgga 300
acaggcggcg caacggcgac ggcggcggcg accagctcgt tgtcgccttc gagacgtacc 360
agcagctgag ccgcgtgtct atccggggcca tgacggccat ctccgacctg gaaacgattc 420
acgaggacgt cgtc 434

<210> 3490
<211> 454
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-024-Q1-E1-D2

<400> 3490

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ctcgacgcgg tcttttcttc ctagtgccca gctttattgc agatccagcc ctctgatcct 180
cgtcttcttt cacctctcca acatgaaggt caacaccaag atcaagctgg agccgggtcat 240

ggcgccgctcg tcgtccctgc cgcggagcgc cagcgagcta cccgacccgc cgtcaccggt 300
cagctccaac acgggcgcacc acccgtctc cgtgcccacc acacctaggt tgccttatac 360
gtgctcgctcg ttcgggccaca tggtgacccc gccacccgac acaccgccga tcacgccna 420
caagaagcag gacgacaagc ccaagccgac gccg 454

<210> 3491
<211> 408
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-D3
<400> 3491

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ccctcctcc tccaacaag gcaacaaca tctgttcgg cgcacaaca aaacccaaaa 120
aaaaaacaca ctgaacccaa taatccgat ccacagaaac ttttctctcg gtccgttcga 180
tcgatcgctg ccgtgtcgtt tgccagacac catcagcacc caaaaccatg gcttgaacc 240
tggctcagt cgcaccgcc gccgcggcga ccgtcgcgcc ccgcaccct cgcctgctg 300
cgtccgcgtc cgtctccttc tccgcgagga agccggcggg cggcagcctg cggctgcagc 360
ggcaggcgtg ctgcgagccg tcggtggcgc cgtcgcgggc ggtgttcg 408

<210> 3492
<211> 436
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-024-Q1-E1-D4
<400> 3492

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gcagcctgcc tgcgtgtggg gtgatggcta ggcacttcaa gtacgtcatc ctccggcggc 120
gtgtcgcggc ggggtacgcg gcgaggagt tcgccaagca gggcgtcaac cccggcgagc 180
tcgccatcat ctccaaggaa ccagtggccc cttatgagcg ccctgcactc agcaagggat 240
acctcttccc tcagaacgt gcaagactgc caggcttcca cacgtgtgtg ggcagcgggt 300
gagagagact acttctgaa tgggtactctg agaaaggcat tgaactgatc ctgagtactg 360

agattgtgaa ggccgacctt gcttcaaaga ctctgaccag tgcagctgcg gaaaccttca 420
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<210> 3493
 <211> 293
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-D6

<400> 3493

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 cggcgacgac cttcgccgtc atcttatccg tcctcttctg tgccgcagct gtcaccgccg 180
 tctacatcga cgtcaccgac tacttcatcc aacgcctcgt ctattgctac acctgccgct 240
 ccgggttcgt gactaatgtc accgagtaca tcgctgccgc caatgtgatg ctg 293

<210> 3494
 <211> 171
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E10

<400> 3494

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<210> 3495
 <211> 430
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-E2

<400> 3495

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gccccgctga tagcagagggc aaagaagaag agagtcgccg ccgccgccgc cgaggagaag 180
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 cagtgcagg gcaagtgcac cgagcagaag ggcataccg cgccgcagat gaaggtgtgc 360
 caagaggcgt gcgacaagga ctacgtggtc aaggcggctg aggtcaccaa ggcctgcaac 420
 acaacctgcg 430

<210> 3496
 <211> 407
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-024-Q1-E1-E9
 <400> 3496

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 cattcagga tggagatgaa gaagatcgcc tgcgccgtcc tcgtcgccgc ctccggcgcc 180
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 gcgcccgccg tcggcgccgc cctcggggcc gccgtgcct ccttcttctg ctactacatt 300
 cagtgagccg gccggggcgc ccggaggccg aggaagagac gaacgggaga gagagtgaca 360
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<210> 3497
 <211> 408
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-F1
 <400> 3497

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 ccacctccta ggtagggcg tgttggaact gccatggggg acaggccggc gccgatcgag 180

aaggctcgcg tgccggagaa gatggccttg ttctccacg ccgccgtcac gtcaccggga 240
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 acaacaacag ccaggaataa gcagcagcac ctgccggtga gccncggggc gtgcctctgc 360
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<210> 3498

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F12

<400> 3498

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 agccagctcg cgaaaataat gaagagccgc agcatggcat catcgccgcg gctcttggtg 120
 ctagccctcg cgctagtggc ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga 180
 gcggcgagga gcggcgaggg ggccggaggcg aagaagatcc aggacgactt ctgctcgacg 240
 ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca aggagtcttg cgcgctctcc 300
 cagcagtcca acctggtgct gtacggcagg atccagtgca agggcaaatg caccgagcag 360
 aagggcacat cggcg 375

<210> 3499

<211> 451

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-024-Q1-E1-F3

<400> 3499

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 tctcctcttc gtcgccatgg ttgtggcacc gatggccgag gcaaagtccg ctgatgcccc 180
 ctccgccgat gccccgccc ccgctgctga cgcacctgcc gatggacctg gcggaccggc 240
 aggtgcacct ggtccccagg gcgtcgaggg actatcgggc aatgaggacg acgacgatga 300
 ctccaccaac taaggccaag cacgtcggtc cgattgcatt tggaacaaga tatgaaagaa 360

aagtgagagc aatgtttgttt aaaaccaaaa atccataata atgtgtgggc atccgtgata 420
 tgttcttgct ctncctcttt ttctttctgt t 451

<210> 3500
 <211> 275
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-F8

<400> 3500

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 cgatcgctccg ccggcgcgac ttgaactaac gacgacgtac gtgcgaccgg gccgggcgtt 180
 ggattagtcc ggctgagca atgggcaaga tcgagtactg cgtggtagcg cacggagcag 240
 tgggtgctggc ggagcactac ggcgacgagc atgca 275

<210> 3501
 <211> 444
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-F9

<400> 3501

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 attcaccggy cggcaataat ggctcgggtt ccggctccgg cgacgacgac cgccgccgta 180
 atcctatgcc tatggtcgt cctctcctgt gccgcggtg acgaccccaa cctccccgac 240
 tacgtcatcc agggccggt gtactgcgac acctgccggy ccgggttcgt gaccaacgtc 300
 accgagtaca tcgcggggcg caaggtgagg ctggagtga ggcacttcgg caccggcaag 360
 ctcgagcggy ccatcgacgg ggtcacgac gcgaccggca cctacacgat cgagcctcaa 420
 gacagccacg angaggacat ctgc 444

<210> 3502

<211> 56
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-024-Q1-E1-G1

 <400> 3502

 atagtgagtc gtattagaan gtncgganca caattcgacc gtccagtgc tactcg 56

<210> 3503
 <211> 365
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-G10

 <400> 3503

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 aaaaaaattc aaaagaaaaa aatgacactc aaggagcaag caaaagaaac tcgaccaggg 120
 catcctgatt ataatgtttg agatgccttt taacatttgg tgtggtggat gcaattccat 180
 gatagcgaag ggagtaagat ttaatgctga gaagaaacac gttgggaatt attactctac 240
 caagatatgg agcttcatca tgaaatcgcc ctgttgcaag catgggattg tcatacagac 300
 agaccaaca gatactgaat atgtcataat cagtggggcc cacaagaaga cagaagattt 360
 tgatg 365

<210> 3504
 <211> 419
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-024-Q1-E1-G9

 <400> 3504

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 accagggcat cctgattata aggtttgaga tgccttttaa catttggtgt ggtggatgca 180
 attccatgat agcgaaggga gtaagattta atgctgagaa gaaacaagtt ggaaattatt 240
 actctaccaa gatatggagc ttcacatga aatcgccctg ttgcaagcat gaaattgtca 300

tacagacaga cccaaaaaat actgaatatg tcataatcag tggggcccag aagaagacag 360
aagattttga tggtgaggat gcagagacat tgctgctgcc agcagatgaa gatcgagac 419

<210> 3505
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H12

<400> 3505

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tcgaggacct cgacatctat gtctcaagct tcttagcgtg atctgctgga tgtaatgtaa 180
ccgatgaacg ctagggaatg ggaatctgag gcagctgtta ctgttaccat gagttgctct 240
ctgccgtttg tccaggggca gagcagggaa gaacacatgt tcttctctcg cccgtcccgt 300
tgtaaaccctt aggatgtgag aatattgaat gtcccatctc tctctctctt tttcttcggt 360
cgaggggtttg caaggaaaac aatttcataa t 391

<210> 3506
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-024-Q1-E1-H7

<400> 3506

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gggaggaagg ggcagctcgc gatcgacgcc gagatcttcg aggtgacacc ggcctttcac 180
gtcgtcgagg tgaagaagtc ggcagggcgc acgctggagt atgagatgtt ctgcagcaag 240
ggcctaagac cttcactcag cgacatctgc tggagcagcc gatctgagga gaacatggct 300
ccttcagtgg ttcagccatc acaattggag ccatcctctt agaccgtctc cgacagttta 360
ctcaccctct ttagtcaatt gttatttaag tgcagtctct tcggagatgc aattacagtc 420
catcctctct ttcttttccc tttctcaaa 449

<210> 3507
 <211> 275
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A10

<400> 3507

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tcgccgctgc aactgcaacc catgccatgc cggcttagtg attgggtata atttggcttg  120
gcagcagcca gcattattat gtgctgatct gttatctttt actagtttgg tcgtccgata  180
tctttctttc tttttccccc cttttcgact ctgtactgaa actgctgaga gattcgcagt  240
attgttgtat cgtattcata tgctactgtt actct                                275
  
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<210> 3508
 <211> 381
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A11

<400> 3508

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ccacacacac acggtgtcga tggcgggccgt aataaggagc cgccgccgcy tgtccgtttt  180
cttctacgtc gtctctgccc cagctgcagc tgcagccgcy gcgcaagcat ccaataacgt  240
cacctccgac gaggagtact gggcgggagc cgccgaggtg gctcggtcgc gcaacctcgc  300
cgcttacgtc agcgaccccg tggccgccac gaaccgcttc aacgcggagc tgctgagggc  360
cacgacgcyg cgggcgctgg c                                381
  
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<210> 3509
 <211> 446
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-012-Q1-E1-F1

<400> 3509

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ggccccggca gagtcaccga aggaaggcag tgctgccaaag gcacctgagg ctgccaagag 180

aactgctgcc cccgctgaag caccgggagc cgcgtccacc cccgtcgccg ccgctgcccc 240

atcatcgctc tctaggaagt ctggtccagc taccgcgcca gccaccgct ctacaccccc 300

ttcttccacg gacgaggagt tgagcccttc cccgccagca tccaccgccc cggcgtcccc 360

tgccgctgan ggaccggctg ctgatgactc cgccggtgct gctgcccttg gaagtggagc 420

tgccatcgcc ggcgttgccg ctgctg 446

<210> 3510

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F11

<400> 3510

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gggcacgtct gcctgggcgt cacgcgtgct cgctgcgccc tcctgcttcc acccccggca 180

gcggcagggg caggaggaga cgacggtcgc caccggcgcc ctgcaccggc ggatgtcgga 240

tcgggagctc cggccccctgc gctccatcag aatcacaggg gacggtcgat gcctgttcag 300

gtccgtcgcc tacggcgctt gcctgaggag aggaaagcat gcgcccagcg acagcgccca 360

gaaggaactg gccgacgagc tccgagccaa agtagctgat gaggttcgtca agcgaagagg 420

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<210> 3511

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-F7

<400> 3511

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tcttccagct aatctatctg ttgatcgtct ttgggatgac atggatacca gtagcatgaa 180
tcctcttccc actgctcttc ttcttctca ttatcatcag gcagcacttc atcccgaaat 240
atcttgatcc gatccacctg aggaattac atgcagccga atacgacgaa ctgaaaggtt 300
ttacacctga tccatcagtg tgtgatgacg agtctgttcg cagcggagat gctcatcctg 360
gatat 365

<210> 3512
<211> 312
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G1

<400> 3512

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tctattgatg taatcttgag atgccctctc aaatcactgt aatggggttt aaaaaacaat 180
cattgtaatg ggagttatat atacttttat cttaacattt atttacacca gcaagtcctg 240
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accgcatca ga 312

<210> 3513
<211> 455
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G11

<400> 3513

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accaacacaa atcatggggt tggggatcgg ctgcactcag gcaggccgcg catcgatatc 180
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accgcaggat gaggggcatg gaggatgatg tgacgagttc gtgaggtcgt cgtctcccag 360
tcaacttttg gttgctggat cattgtctca tatgatgtaa ttattttattt tattttgtac 420
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<210> 3514

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G3

<400> 3514

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ctaacggccc gtttccgttg aacctcaag cccgggaacc ctgcgggccg gttccggtcg 240
ccccaaaaac ttagtacgtt catgaacacg acccgcttgg tcaggtctct ggaaatgtgc 300
aacctgcatg tgttttgect gcgagcggtt ttcctttggc tgtcgaccga tcgtgaatcc 360
gtcacgcagc actc 374

<210> 3515

<211> 463

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G5

<400> 3515

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cgcgcggtgg cggcggaggc ggaggcgaag gcgaaagctg tgggaagcgc gccgtcggtg 180
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gtcatcccca agggcaacta cctgacgggc gcgctggacc tgggtgggcc ctgcaagtcc 360

tccatcatca tccgcctcga cggcaacctg ctcggcacccg gcgacctcaa cgcgatacaag 420
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<210> 3516
 <211> 455
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G6

<400> 3516

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<210> 3517
 <211> 456
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
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<400> 3517

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 aactacctga cgggggggct ggagctgaag ggccctgca agtcctccat catcatccgt 360
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456

<210> 3518

<211> 210

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-G9

<400> 3518

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atctctcgga atacaacctt tgtcaaggca taggtattat tgtatttaat gattcaatgt 180

attaagtgaat tatgatataa tgtatctgtg 210

<210> 3519

<211> 468

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H1

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ttggtacagc ttgtgctctg gactacactac atgacgcgtg ttcacctcca gtgatccaca 180

agaacatcaa ggcacccaac gtcttgctcg atgtgacct caacctcac ctactgact 240

gcggccttgc atacttctat gaggatccga gtcagagcct gggaccaggg tacgatcctc 300

cagagtgcac aaggccatca gggtacgtta tgaagagcga tgtctactgc tttggtgtcg 360

tcattgctca gctgttgacc ggccggaagc cctacgacag ctccaagcct agagcggagc 420

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H11

<400> 3520

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atgaagagtt tttatcactt atgaatgagc ataagatcct ccaaaagaaa tatgaaaacc 180

atcctgatgt tttgcatgct gaaattgagg taaagagact ccaggaggaa ttggacatgt 240

tcaggaactc tgtggacgag aaagaagttc tacaggagga gatacaagat ctgaaaaatc 300

agttgcatta tatgctttca tcatcgatc caatccgtag gctctggcct ccagtgccgt 360

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tggaactc 429

<210> 3521

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H5

<400> 3521

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cgacgacgtg ccgccacatc cacatggcgg acgacgccgt cgccggcgga gcggccgttc 120

gctgcgagc gccggcgccg gcctcgctgt cttctagcag gaagcagcag cagcagcccc 180

acgacgccg ctgcggcagc agcgacgacc actaccagca cgacgtgac atgctgaggc 240

ggacgaggag cggggcgggc ttcccgcgc cgatctccgt gatcggaag ggcgggcggc 300

cgtggctctg cctgccggcg caacgcgaag gtggacgcct cgtgctgccg gaaatgcgcc 360

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<210> 3522

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-012-Q1-E1-H6

<400> 3522

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 ccaagtcttg ggaggtgatc tgcgacgagc acggcatcga ccacacgggc aagtacgccg 180
 gcgactccga cctccagctc gagcgcatca acgtctacta caatgaggcc ggcggggggcc 240
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 ccggccccta cggccagatc ttccgccccg acaacttcgt cttcggccag tccggcgccg 360
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 acgtcgtccg c 431

<210> 3523
 <211> 364
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-012-Q1-E1-H7
 <400> 3523

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 accatgtccg tctacgacga tgtcatccct gccaaactgga aggccaacac cgcctacacc 180
 gccaaataat taactttagt gctgacaata ctttaagccg acctatgcta gctatactag 240
 attgggttgg atcccaagca atgcattaca catgcatgca ttggaccgtg atatctattt 300
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<210> 3524
 <211> 444
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-013-Q1-E1-A6
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cgccgtcgtg gcgctgctgt ccgccgggct cctcccgcag gcgctgggta agggtagggg 180
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gagcagtaac ggcatactg cgccgggcca taacgtctgc caggaggagt gcgacaaggc 420
gtacgtggtg aaggcggccg aggt 444

<210> 3525
<211> 283
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A7

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gggcgctgag ctgcgcgact gcacgaggct cctgcagcac gatccgttca acggcgacgg 180
acgtaatatt ggcgctgaca caatgatcac accgattggc ggcacatata cggcgatcga 240
ctgcttggat gccgcggacc ttgtggtcga gaccatgtcc cct 283

<210> 3526
<211> 308
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-A8

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tgaggatcat ggcgatgctg tatgtcatct gctccgccct cgtgtcgggt acggctgtca 180
gagccgtgct ggcgtcagtc gcatcgtagg cgccgtccta agcgtccacc agcacttccg 240
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gctctctc 308

<210> 3527
 <211> 365
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-A9

<400> 3527

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 ggcggcatga tccgcgactc gaagcggcac tacgggctgc gcacgcggag cgacggcgac 180
 ggcgtctccg tgctgtcgtc cagcaacgtg tggatcgacc acgtgtccat gtccagctgc 240
 tccgacgggc tgatcgacgt ggtgaacggg tcgacggcca tcaccgtgtc caacangcac 300
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 gtgat 365

<210> 3528
 <211> 410
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-B12

<400> 3528

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 cctcgacgcc gtcctttcct cctagtgcc agctttattg cagatccagc cctctgatcc 180
 tcgtcttctt tcacctctcc aacatgaagg tcaacaccaa gatcaagctg gagccggtca 240
 tggcgccgtc gtcgtccctg ccgcggagcg ccagcgagct acgcgaccg ccgtcaccgt 300
 tcagctccaa cacggtgcac caccctgtct cegtgccac cacacctagg ttgtccttat 360
 cgtgctcgtc gttcggccac atggtgaccc cgcccaacga cacaccgccc 410

<210> 3529
 <211> 412
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-B2

<400> 3529

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catcatcagc gagaacgcgg gcgtgtcccc gatgcacctg gtgatcatgc ggagcgacaa 180

ggccatcatg ttgcacacgg tcaccacggn gccgtcgctg ctgcggtgc ccaaggggaa 240

ctgccgcctc gatctccgca gcaagcaagt cggcgccaag gactgcgccg cgcacgccgt 300

cgagtttgat tacgcgacag gcggtgtcag ggccctcaag gtcttgacgg acgtgtggtg 360

ctcgtcgggc gcgctcgacg ccgagggcaa cctggtgcag accggcggct ac 412

<210> 3530

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B5

<400> 3530

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gcacgggaag ctgcctcgcc gacgagagcc acatcatctg ggacaagggc cacgtcgtgc 180

aggacctcct cctcaggctc cggaacgtcg actccggcgt cgtccacctg cagctcagat 240

gggtcgccac cccacctgaa gactgaactg gaggagacga actgcagtat gtacgtgctc 300

tcgctccata tccccatggg aagaacgtac ggattcgctc gcgtgacgat gatactatgc 360

gatgcatgca tgctcaagag tcaagatgtc actgtcttct gtgtatttta gtacagccac 420

gtacattgtc gccatccaac atcactatgc atg 453

<210> 3531

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B6

<400> 3531

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ctttcctccc ctattcatca agaccgcaat aactgtcgct acctatgctt ctcacttgtg 180
atTTTTggac acaatatgtt aaggTccatt caattctaata gagacgcctg atgaggctac 240
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<210> 3532

<211> 352

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B7

<400> 3532

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catcttgcta ataaccctgc gtgcccttcg ttctcgtctc gatcccgacg acgctccctt 120
cggctccggc aaaccacatc aagtcgcat ggagatgaag aaggtegcct gcgccgtcct 180
cgccgcccgc gcctccgcca gcgtggtcct cgccgccgag gtcccggcgc gcggccgcat 240
cagcgccctc tcggccgcgt tcccgggcgt cggcgccgtg ctgggggcct ccgtgctctc 300
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<210> 3533

<211> 193

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-B8

<400> 3533

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ggagggataa attacgtcac aattgtcaca acttaggtct cctacttctt ctttttgtac 180
acagtatctt aaa 193

<210> 3534
 <211> 200
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-C1

 <400> 3534

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 gtgtgtgttt ggcacggctc cggctacttt taaattgact cgggtccaa catttttaca 120
 agaggaatth ttaataaatt atttggcaaa acgacatctc ttgtattttt atttgatata 180
 tataaggaaa atgtccataa 200

<210> 3535
 <211> 387
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-C10

 <400> 3535

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 agccacctga ggcagcggat cgcggcgctc gcgcaggaca agatcttcaa agatgctcat 180
 caggaggcac tgaggaagga gatcgagagg ctgaggcaaa tctaccacca gcagagcctg 240
 aagagcggca gggagcccga cgcggccccg tcggtccgag acgacaagga catgatcggc 300
 agcgagggga ccgccgcgcc cggccccccc tcgtgatgag gaggaggtgg tggggcgaca 360
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<210> 3536
 <211> 439
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-C2

 <400> 3536

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gtcctggccg ccacattagc gctgttcctc cgcgccgccg ccgcaacggc cgcgacggct 180
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 gacggcagga cgctctact 439

<210> 3537
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C3

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 gcgctagtgg cggccaccgc cccacaggta gcggaggcac tgaagaagag agcggcgagc 180
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 aacctggtgc tgtacggcac gatccagtgc acaggcaagt gcaccgatca gcatggcatc 360
 acagcgccgg tcatgaatgt ctgccaggag gagtgcgagt cggcgctacgt ggtgaatgcg 420
 gccgatgtca cca 433

<210> 3538
 <211> 439
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C5

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 acgagacggg ggtgcccag ggtaccacg agtacctccg ccccttgctc aagcagcagc 180

tcaagctctc caggetctag tctgatecgc tccccccct ggaattctcc atggcggtg 240
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tgttagagcc aggaaagagg ctctccagcc aattataaat ttattcctca agctctgagg 360
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gatgagcatc tctctgttg 439

<210> 3539
<211> 440
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-C7

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acggcgccat cgagccggtg gcgctgccgt cgtcgacgtc gagggggcgg ctgtccatca 180
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tcctcgggga gaagtgcagg atcccggggg agcgggaggg ggagtgcgct gaccccgacg 360
acgacatcgc cgccgccagc ttccgccggt ccagctactc ccggcccgtg tcgcggtcga 420
gctcgttcgc catgcaccag 440

<210> 3540
<211> 446
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-013-Q1-E1-C8

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taatgtggac accaccactt ccagtgttgt caacaaagat gcgaagcgca gcattagaag 120
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cagtgatgct agggacccat cagatacgaa atccagcact aaaattgtta gtagtgctga 240
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 tgataagagc aatgacaccg tcgatgctaa tgtgaaatcc aactctggaa ttgttgcaaa 360
 cagtgatgct agtaacaccg atgtacagac taacactgga agtgtcaaca acagcgatga 420
 ttacagcatt gactcanaac caaaca 446

<210> 3541
 <211> 452
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-D1

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 aaccaatgg ggggtggcat cctccacca ccattcggct tcaaggattt tcatcatgca 360
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 ggagaagcaa accgggctgt ggctccctc ct 452

<210> 3542
 <211> 400
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D10

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<210> 3543
 <211> 275
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-D12
 <400> 3543

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<210> 3544
 <211> 443
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-D5
 <400> 3544

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<210> 3545
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D6

<400> 3545

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cagacatcct ggccttcgag gcgag 445

<210> 3546
<211> 437
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D7

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<210> 3547
 <211> 454
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-D8

<400> 3547

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gggcaccgac tacctgctga aatgcgccgc caggaagaac aagctgtggg tgçaggtcgg  180
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gctgtacgag atcgactcga agacgcccg gacggagatc gccgccgaga cgtcggccgc  300
gttcgcgcc tcgtccatgg tgttcgcga cgacaagaag tactcgcga agctgctgaa  360
caaggcgaag ctgctgttca cgttcgcca gagccacctg ggcagctacg acggcgagtg  420
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<210> 3548
 <211> 445
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-E1

<400> 3548

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<210> 3549

<211> 366
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
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 <400> 3549

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 ctcttggtgc tagccctcgc gctagtggcg gccaccgccc cacaggtagc ggaggcaaag 180
 aagaagagag cggcggagag cggcgaggcg gcggaggcga agaagatcca ggacgacttc 240
 tgctcgacgc tgtgcgaggg caagaagggg acggacctgg tcgtgtgcaa ggagtcctgc 300
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 <213> Zea mays

 <223> Clone ID: LIB148-013-Q1-E1-E5

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 cccaggcaa gaacatcacg gccacctatg gcaaggactg gctggacgct aaagcgacat 180
 ggtatggcaa gccgacgggt gccgggtccc acgacaacgg tgggtggctgc ggggtacaag 240
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 atggtctggg ttgtgggtcc tgcttcgaga tcaagtgcga taagcctgtg gagtgtccg 360
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 tcg 423

<210> 3551
 <211> 443
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E6

<400> 3551

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gccacccatg gggctcacgc accacgtcga gaaggccatc gacgcgggca ccttcgcgca 180
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cgcgctcaag tgcacggaga tgcggcggag ggaccggccg gacctcgcaa ccgtcgtact 300
gccggagctc aaccggttaa ggaacctcgg ccacgcgtac gaggcacgca tgagcgccgt 360
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<210> 3552

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E7

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gagaaattaa gatgagcctc ttcgggcttg ggagcaagaa tcagaagacg ttcaggccta 180
agaagaatgc accgtctggc aacaagggtg tgcagctgaa gaaacacatc gatgcaacct 240
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ggctagctgt taacctgtt gatttcttca accaggtgaa catcctgtat ggtactctaa 360
tggagtctg cacaccagct acatgcccaa caatgtcagc tggaccaaag tttgagtata 420
gatgggccga tggggtgcag 440

<210> 3553

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-E9

<400> 3553

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cgtcgccttg gcgacttgta caaacaagtc tgttgatgcc cgcgtgggtcc accccatcgt 120

caccctcgag gccgatggct catctccac ctctggcgat ggctcgtcgc tgatcagctc 180

caccaaccaa gatgaacttg gagcgttatg ccaacagatg cactacaaga cgttgtgctc 240

cacgatgacg aactgcctg gggtgactac gccagagcaa ctcttagatg catccctgcg 300

gattacagcg gtgaaggcag cgatggcgga gatgaagcta gacaatgcaa taaaatcagg 360

cagtgtcag ggtaaccga tgatgtcgtc gctaaagaca tgc 403

<210> 3554

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F10

<400> 3554

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ggaaatgatc aggcgacaac ccggcatgga tcggttctctg cagctgctgg ccgccggcgt 180

ggccgtgcta ctgctagtgg caccgcgggc catggctgac gacgacattg tagaagtcgg 240

cgtcaactgg ggatcgcagc tctcgcaccc gcttctcccc ggctccgtgg tgaagatgct 300

caaggcgaac cgcacgcga gggtaagat gttcgacgcc gactcctggc ccgtcggagc 360

gctcgtcgac tccggcattg aggtcatgct cggcatcccc aacgacatg 409

<210> 3555

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F3

<400> 3555

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tatggaaggt ccgtcggagg gactcgggca tcgaggccat ggcgaggccg cacccttct 180
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 gggctcactg gcacgtctct cacggccatc gaattccaga gctgcgattc ccgaggccat 300
 ggagcagcag acaatatcaa ttgccaaagc tgccattaca atagtactca ttttagggac 360
 ttcagttctt gcagctgtca atccaattgc aggatgctat gacgctctta aggttcgtaa 420
 acatgtattt attgatgcaa taat 444

<210> 3556
 <211> 455
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-F4
 <400> 3556

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 ggctcccagt gtttaactct gtagcagaag ctaaggctga aacaaaagcc aatgcaactg 180
 ttatatatgt tccaccacca ttgcccgcg ccgtataat ggangcaatg gaggtgagc 240
 tcgaccttgc cgtctgcatt acagaaggaa tacctcagca tgacatgggtg aaagtgaagg 300
 ctgcactaaa cagccagtct aaaactcgat tgattgggccc aaattgccct ggtatcatta 360
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<210> 3557
 <211> 439
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-F5
 <400> 3557

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agagcccagg cgccgcgggt ccgtgtcggc ggcgttgccc agcggtcgcg ctccgcctcc 180
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acgatgacgc cctgcctttt tgacgcccc gcatctgctg ctggcgctg gctggctgct 300
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gttactgctc ccgctggccc atgggcccggc atggaccatg gggatgcana tgcaattgtg 420
gccagcgtg cgtgcgtac 439

<210> 3558
<211> 443
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-013-Q1-E1-F7
<400> 3558

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gctctcgccg cggccacgct ggcgctggcc cacggggcgc aaggaggagg accatcggca 180
tcggcgccgg acctggacaa ggtcacggcc gagaccttct tggacatcga gatcgacggc 240
aagcctgcag gccggatcgt gctgggactg tttggggaca ccgttcctaa aacagcagag 300
aacttccgag cactttgcac aggggagaaa ggaattgcc agtccggcaa gcctctgtgg 360
tacaaggggt cgacgttcca caggatcatc ccggggttca tgatccangg aggcgacttc 420
accaacggca acggcacggg ggg 443

<210> 3559
<211> 451
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-001-Q1-E1-C7
<400> 3559

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ggaggcgccg gctccgtctc ccaccagcgg ctccctccgcg gtcgcacccg ccatcgtcgg 180
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 agccggaggg aagagaccaa ggtgggggga gagacttggc tgcgctgcgc tgctctgctg 300
 ctcccgcgca ttcccgatgc gtgggcgtgc tctgattggg cacggcggtg gcagtggcac 360
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 cgaattggta tcgctgatgc accagtttaa t 451

<210> 3560
 <211> 360
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C8

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 aagaaataaa aaaaataacc ggccgcatca gcgtcggctc ctccggacacc tgtggctctg 120
 tccgcggatc gcgccagatc catcacgacc agcgggtcca ccgcggctgc agtcgcgatc 180
 gtccgtgctg ccttggactc cttcgtcgtt taccacattc actgacttgc cggactatga 240
 gcctgagcca gatggaatag acgcaagtag ggggacagag ttggctgcgc ttagctgttc 300
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<210> 3561
 <211> 467
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-C9

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 aggaagagtc aaagggcatc gatgcgaaag cgtccggggc tggtaggtcc ttcgacatca 180
 ccaagttggg cgctccggc aatggcaaga cagacagcac gaaggctgtg caggaggcat 240
 gggcatcggc gtgcggcggc actgggaagc agacaatcct cataccaag ggcgacttcc 300

ttgtcggaca actcaacttc acaggccctt gcaagggcga cgtgaccatc caggtggatg 360
gcaatctgct ggcgaccacg gacctaagcc agtacaagga ccatggtaat tggatcgaga 420
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<210> 3562

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D1

<400> 3562

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gtggtcgcaa ggatggccgg gggcatgcag gcggcggacg cggcgggccc gctgagcgcg 180
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tccgatgccg ccacggcctc gcgcgcgggg gccagcggga ggaaggggaa ggcgtcgtcg 360
tcgtcgtccg tggttctgcg ggtggccggc ggggtcccca tggtcgcgcg gcggaagcag 420
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<210> 3563

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D10

<400> 3563

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tccattccga ggactgctgg gccgacacc gcgtcatctg caccaagacg cacaactgcc 180
gggacgacac ttgcgcgggg gcgcggcatgc cggacggccg ctgccactgg gagttcccca 240
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tggctcactt cgccggcgat gatggatggt gcccaactgc gactgccag tctgctccat 360

tcgttgttgt ttaaggcata atatataaac tgccaaattc acatgtattt tgggatattt 420
ggtatcatatc tatgaaatga ctgtga 446

<210> 3564
<211> 462
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-001-Q1-E1-D11

<400> 3564

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tactgcctt cgtttctctt tccaacaatc aagatgagcc gtggcggttag cgcgggtggt 180
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ccaccagctg taagtgtctc acctgtgtct gcaggtgtct cacctgtctga gaaaccacct 300
gctgcaaagc ctgatggcac cagtcagatt gctgtgtggg ttaccagcca aaccaataac 360
tatcacaggg ctgacggta gaacaccggc aacttcctta cggaccgccc ttcgaccaag 420
gtccacgctg ctctgtggcg tggctcttcc ctngatacc tg 462

<210> 3565
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D2

<400> 3565

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aatggccgat gccgaggata tccagccct cgtctgcgac aacggaactg gcatggtcaa 180
ggctgggttc gccggcgacg acgccccgag ggccgtcttc cccagcatcg tggggcgccc 240
gcgccacact ggtgtcatgg tcgggatggg gcagaaggac gcctacgtcg gtgacgaggc 300
gcagtccaag aggggtatcc tgaccctcaa gtaccccatc gagcacggga tcgtcagcaa 360
ctgggacgac atggagaaga tctggcatca caccttctac aacgagctcc gcgtggctcc 420

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446

<210> 3566

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D3

<400> 3566

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acatcggtcg agctcaagat tctatctgat aaatggcggc ttctcctcgc tggcctcatt 180
ttccagtaca tacatggttt ggccgctcat ggggttcatt atctgcaccg gccgggcccct 240
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agtgaacat tgtttacatt cgtcttcctc accttcgttt tgtggacatt tcctcctttc 360
atccttcaga ctaaagcgtt ctacactgtt ctgatatggc gcaagggtact tgccttctta 420
tgtgcttctc agtttcttcg aataataa 448

<210> 3567

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-D4

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gcgcacgtcg ccccggggct cagctcacc accgagcccc aaccaattaa taatatatat 180
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gccgccatcg acgaggcgta cgcgcctctc gtcaacctca ncgctaacca ggagtactgg 360
gcggagcgcg cggaggcggc gcacgcgtac aaccgcggcg cgttacagac cgaccccggtg 420

gccgtcgtgc agcgct

436

<210> 3568

<211> 350

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D5

<400> 3568

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gtcagtccta ttgggtgaga gagcatgctg gatcttcggc catatgctgt aaatcgcttg 120

ttaatttttg ttctactagt acacgaagaa atcaaggaaa aaaaaccttg actacgggaa 180

gaaaatcacg gccacagggg tattttaacc tccttcctaa tgcgcatata tctatcgaag 240

ttgagtaaac tttgatataa tgtattcatg ggtcacgtcc aaccaaccct gtgattgggt 300

gcttgtaaat ttttgtggcc ttaatcatgg cttcaatgat gtccttcggt 350

<210> 3569

<211> 407

<212> DNA

<213> Zea mays

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ggcgaagggg tgagatggat cggcggggcg tggccgggga ggagctgggg aggatgacgg 120

tgcgcgggag caggatgcc a tcggctaattg tggtagcgac gcggccggat ttggaagagc 180

gcagctagca cggcgccgta gcggtacgct agctcctctc cgagtacctt gcaccaaccg 240

gggggtcttg ctctcaact gatggcaacg gggagttccc ctccggaaat atctcacctg 300

ctccgtccac gcgacgaatc aacttccttg catggatgct atgaacgctt tgctaggaat 360

atttcttctt tatctctgtt cctcgctgcg ataaatcccc aacggga 407

<210> 3570

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D7

<400> 3570

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ccgggggggtg ctgcgctgca ggcacgggtg ccgaagacga ggtatgcatt gtcacgagcg 420
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<210> 3571

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D8

<400> 3571

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gctgcctctg catggtactg gacggcactg ccacgtcctt cggcatcgcc atcaaccaga 360
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<210> 3572

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-D9

<400> 3572

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aggatgaggc gcaataatat gcat 444

<210> 3573

<211> 447

<212> DNA

<213> Zea mays

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<400> 3573

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gagaggaaag gcggcatccg gtacacgata acaggaacc agcactacag cgaggtgaag 240

gtgaccaacg tgggcggcgc cggggacgtg gtggcgctgt gggagaagg caacaagcgc 300

gtcaagtgga cccgatgaa ggcagctgg gccagctct ggaccacgga ggtcgacctc 360

accggcgagt cgctgacgtt ccgcgtcatg accgccgacc accgaaggc tacctctgtg 420

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<210> 3574

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E12

<400> 3574

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agcgctccgc gaggcctcgt cgcaagctgc agaaatgac caggaacctc tcgccgccgc 300
aaacagccgc tgcgccggcg acgggggcac cgcagccgca ggcaataata tctcaggaac 360
cgcgccaaga agaagcagca gtggtagtgc cgtaatccag cccttgaggt ggaattttgg 420
cgccggc 427

<210> 3575
<211> 442
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-001-Q1-E1-E2
<400> 3575

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gtcacggctt ctccacgtg gtgaacaacg actacacgca ctggctcatg tacgccatcg 120
gcggcagccg gaaccccacc atcatcagcc agggcaaccg ctccgcgcc gtcgacgaca 180
gcaggttcaa ggaggtgacc aagcgggagt acacgcagta cagcgagtac aagaactggg 240
tgtggaagtc gcaggacgac ctgttctca acggcgctt cttaaccag tccggcggcc 300
agaacgagcg caagtacgac aggtcgcacc tcatccaggc caagggcggc cagtacgcc 360
agtcgctcac caggtacgcc ggggcgctca actggcgctg cggcaggaag tgctagtgcg 420
tgtgcaactc taggtgcag ct 442

<210> 3576
<211> 396
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-001-Q1-E1-E3
<400> 3576

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tgcgctgtgc atgatgccat catcttctgc cactgctgtg acgccaggct gtgcctgcac 120
 tgcgacgccg ccgtgcacgg ggctaccgag gcggggggcg tccaccccg cgcccggtc 180
 tgcgacgcgt gcggcgccgc gccggccgcg ctgcgctgcg acggcacctg gacgctgtgc 240
 gccgtgtgcg tcggccgctg tgctcccggg gtgaccgcga cccgcgtggc cacgttcaac 300
 ggctgttccg gccctgctga gatgggtggc ctcatcttccg ttgaccacc gcctctggag 360
 caggactttg aggcctggct cgcagacaag ctcccg 396

<210> 3577
 <211> 434
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E4

<400> 3577
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 accaacggca acggcacggg gggcgagtcc atctacggca gcaccatctt ctccgacgag 120
 aacttcaagc acacccacgc taaagccggg acgtgtcca tggctaacta cgggcccgc 180
 tccaatggct cccagttctt catcaccacc gtagacgaaa accggttgcc caagaagctg 240
 gacggggccc acgtggtggt cggcaatgtg gtgaaaggga tggacgtcgt gcgcaagatc 300
 gaagccgagg gccagctcac cggcgtgccc aacgccaacg tcgtcatagc caacatcggg 360
 cagctgccag cggccgcccg cgccggccat cgtgacctct gatcgatgac gacgagaacg 420
 actcacgatt catc 434

<210> 3578
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E5

<400> 3578
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 tctgcatcgt gcatggtgag aaggaagagt caaagggcac cgatgcgaaa gcgtccgggc 120
 ctggtgggtc cttcgacatc accaagttgg gcgcctccgg caatggcaag acagacagca 180

cgaaggtgt gcaggaggca tgggcatcgg cgtgcggcgg cactgggaag cagacaatcc 240
tcatacccaa gggcgacttc cttgtcggac aactcaactt cacaggccct tgcaagggcg 300
acgtgaccat ccaggtggat ggcaatctgc tggcgaccac ggacctaagc cagtacaag 360
aacatggtaa ttggatcgag attctacgcy tggataacct ggtcatcacc ggcaagggaa 420
accttg 426

<210> 3579
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E6

<400> 3579

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tcgtcggagc cgtcactcag agcataccta tgatgattgt gtctgaactc catgaagaga 120
aagacttata agtctgtatc cagaagatag gaaagttaaa gcctcagaag gtgctaagat 180
acggccttga tattgccagg ggcatgacct acctccacca gtgcaagccg gaccccatca 240
tccactgcga cgtaaagcta aagtgccaga catatcttcc tggatagcgg aggccagctg 300
aagatcgcgg gggtcggagt gacaaggatg tccaaagtcg ggaccgacaa cgtgaggttg 360
attctacatg gcgctctcgt cgacagcttc agctaccaca ccgcgcctga gctgt 415

<210> 3580
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E7

<400> 3580

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cgccacatct attaggtgca gccatgggtg cctgtgcaac gaagcctaag acgcttgagg 120
ggaaagcccc agctgaggcc accatctcca cacccaaggt tgcacctgag accactacca 180
tccacattga gggtgcggca aaacatgcag tagttgagaa ggtggaggag gacaaggagg 240
aggcactaac agtggcgggc aaacaagagc cagcagccac cattgagcct cagcagattg 300

ctagtgaggt gaccacttcg gaagtggcgg tcgtcggtgt cgagcctgag aacaaagagg 360
aggaggaagt tgtggagaag accgtcatcg agaaggagaa gccatcagca gtccatgcag 420
aggaaaa 427

<210> 3581
<211> 222
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-E9

<400> 3581

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ccgctcaggc atccggtcac tcgtaccggt gcgcgtccgg atacgcttcc gcgcgagatg 120
gcgatagagc gctgcgagga cctcaacata agcatccgac atcgacatcg agatggacct 180
agcacatgag cacatcgtga gcaccagat cacgctgcac ag 222

<210> 3582
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F10

<400> 3582

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cgctcctaga caagatcaac gacaagatca acgagaagat ccatgagtat aagcactcgt 120
cgtcgtcctc ctctctcttc gactcagacg atgacaagaa gcccaagaag tctaagaaga 180
agaagctttt tggaagaaaa catccattgc atcatgtcct cggaggaggc aaagccgccg 240
accttgtgct gtggaggaac aaacaggcat ctgggagcat cttggtaggg gtgaccgtga 300
tctggttact gttcgagggc atcggtacc acctccttac ctctctttgc cacgcactaa 360
ttgtgtttct caccatctgg ttcattctgt ccaatgctgc gtcatttgc aacaggtcac 420
ctccaaagtt cccag 435

<210> 3583
<211> 441
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F12

<400> 3583

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catcgaccac gcccccttcc aggctcccgt ctccatgggt ctctctcaa acaggattgg 120
gagggagagc ctcaaggcgg gggatcatat ctactcctgg agggcggcgt gggctctacgc 180
gcatcaggga atatatgtgg gcgatgataa ggtgatccat ttcacaagag gaagaggaca 240
ggaggtctga acaggaactg tcgtcgatat tattcttgtg agttccaccc catcacgaag 300
caacacgcct tgcccgggtgt gcaccgacga aaccagcgac agcagcacag agacgaacgg 360
cgtggtatcc tcttgectca gctgcttctt agctgggggt gctctctacc gtttcgagta 420
cgcagtcaac ccggcgctct t 441

<210> 3584

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F2

<400> 3584

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tctgaaagac aagaactacg gcaagctcgt ggacgcgtcg ctgaaggagc acaaggaaag 120
cgagctggag gccgtctgcy aggtgatcca agagtgcacg gaccctgacc cgacgcggcg 180
gccgtcgatg agagacgtcg tgggcaagct gcgagacgct ctggcatct cgcccgaggc 240
ggcgggcgccg cggctgtcgc cgctctgggt ggcgagctg gagctgctgt cgggtgaagtc 300
aacctagtgt ggagaacgct gtgtatactg atactgtacc aacatgttcc aacgctcttc 360
tagctgagct ctaacaggat tcgtataggg gcttcaattc gtgctgctga tgctaca 417

<210> 3585

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F3

<400> 3585

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aggcaaaagc agccatggcg aactcgtcgt ccggccttgc ggtgaacgac gagtgcagg 120

tgaagttccg ggagctgaag tcgcggcgga gcttccggtt catcgtgttc aggatcgacg 180

acacggacat ggagatcaag gtggaccgcc tcggcggacc gaaccagggc tacggcgact 240

tcaccgacag cctccccgcc aacgagtgcc gctacgcgat ctacgacctc gacttcagca 300

ccatcgagaa ctgccagaag agcacgatca tcttcatctc ctgatcgctt gacactgcac 360

gcaccaggag caagatgctg tacgccagct ccaaggacag gttcaggagg gagctggact 420

gcatccagtg cg 432

<210> 3586

<211> 390

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-F4

<400> 3586

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atctctgtgt gctcgggtgt ggccggagtc gtgcagaccg acccccgtgt cctctgcatg 120

gtactggacg gcactgccac gtccttcggc atcgccatca accagaccag ggcgctggag 180

ctccccggcg tctgcaaggt caaggcgccg ccgctcagcc agtgcacagg cgtccctgcg 240

gcacctgcac cgacgcctcc cgacgagcca gcagcggcag ctgaggaaga agccgacgca 300

gctgcagatg ccccttcagc anatggagcc tcaagctcca caaactcaaa gaatgcagcg 360

agcttactgc gtctcatctg cgcattgctg 390

<210> 3587

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F5

<400> 3587

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ttctcgtctc gatcccgacg acgctccctt cggctccggc aaaccacatc aagtcgcgat 120
 ggagatgaag aaggctgcct ggcgcgtcct cgcgcgcgcc gcctccgcca cegtggtcct 180
 cgccgccgag gccccggcgc ccgccccac cagcgctcc tcggccgctg tcccggcctg 240
 cggcgccgtg ctggggcgct cegtgtctc cttcttcgcc tactacctgc agtaaaatta 300
 aaggaggggc ggaggagat gctgctggct gccattgcct gtattcggtt ggattccgtt 360
 tatatatata tttaagtact ttaatttggg tctgaacatg tcgattgatc cattca 416

<210> 3588

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F6

<400> 3588

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 gatggcgaac ccgacgacgg ccgcgggcat gctgcgcgtc ttcttcacg actgcttcgt 120
 caccgggtgc gacgcgtcgg tgctgatcgc gtccaccag ttccagaagt cggagcacga 180
 cgcgagatc aaccactcgc tcgcgggga cgccttcgac gccgtgggtgc gcgccaagct 240
 ggccctggag ctggagtgcc ccgggggtgt gtctgcgcc gacatcctcg cgctggcgctc 300
 gggggtgctg gtcagcatga ccggcgggcc ccggtagccg attccgctgg ggcgcaagga 360
 ctgctgtcgc tcgtcgcca cagcgcccga cgtcgagctg ccgcacgcca acttcaccg 419

<210> 3589

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F7

<400> 3589

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 gacgaagcag atggcgaacc cgacgacggc cgcgggcatg ctgcgcgtct tcttcacga 120
 ctgcttcgtc accgggtgcg acgcgtcggg gctgatcgcg tccaccgag ttccacgaag 180
 tcggagcacg acccgagat caaccactcg ctccccggg acgccttcga cgccgtgggtg 240

cgcgccaagc tggccctgga gctggagtgc cccggggtgg tgtcctgcgc cgacatcctc 300
 gcgctggcgt cgggggtgct ggtcaccatg agcggcgggc cgcggtaccc gattccgctg 360
 gggcgcaagg actcgctgtc gtcgtcgccc acagcgcccc acttcgagct gccg 414

<210> 3590

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-F8

<400> 3590

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 acttcgtagc cgcaagcatt ctctcttctt tctccattcc atcggtgacc atggattgaa 120
 gacattgata ggcttctctg gaggtgcgtg tgagcagctc ggaggtcagc cgccgagaag 180
 agtcatagg caatggcaac cgcaaggaag gacctcagc aggttgataa agtcaacctg 240
 aaacccagcg agtctggcaa aggggtagta cggcgtgcaa ggtctgtccc gacctctccg 300
 gatcgagat cgtccccatc cccggcccc a gtctcagaca acgacagccg accggcatca 360
 tcaactcaaca ctgcacgac ctgctcccg tccacaacaa catctagctc ggcggcctct 420
 tcaagccacg ggaagacgat gcgctccgc 449

<210> 3591

<211> 370

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G1

<400> 3591

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 gtgttttgac acacggatat gtcagtccta ttggttgaga gagcatgctg gatcttcggc 120
 catatgctgt aaatcgcttg ttaatttttg ttctactagt acacgaagaa atcaaggaaa 180
 aaaaaccttg actacgggaa gaaaatcacg gccacagggg tattttaacc tccttcttaa 240
 tgcgcatata tctatcgaag ttgagtaaac tttgatataa tgtattcatg ggtcacgtcc 300
 aaccaacctt gtgattgggt gcttgtaaata ttttggtggc ttaatcatgg cttcaatgat 360

gtccttcggt

370

<210> 3592

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G10

<400> 3592

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gttcctttta gcgctcttct gtgtcgtgca tgggtgagaat gcaaagtcaa aggacaacga 120
tgcaaaagcg tccgggcccc gtgggtcctt cgacatcacc aagttgggcg cctccggcaa 180
tggcaagacg gatagcacga acgctgtgca ggaagcgtgg gcatcagcgt gcggcggcac 240
cgggaagcac acgatcctca tccccaaggg cgacttcctc gtcggaccac tcaacttcac 300
atgcccacgc aatggcgacg tgaccatcca ggtgaatggc aatctgctgg cgaccacgga 360
cctaagccag tacaaggatc atggttaattg gatcgagatt ctacgcgtgg acaaacttgt 420
catcacgggc 430

<210> 3593

<211> 443

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-001-Q1-E1-G12

<400> 3593

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actgtggact tcatcttcgg cgacgcggcg gcggtgttcc agaactgcat cctggtgctg 120
cgccgcccga tggacaacca gcagaacatc gcgaccgcgc agggccgcgc ggacgcgcgc 180
gaggccacgg ggttcgtgct ccagaagtgc gagttccagg ccgaggccgc gctccgggac 240
tccggggccc cgcccatccg caactacctg ggccggccgt ggcgcgagtg ctgcgcgacc 300
atcgatcatg agtcggagct cccggacttc atcgacaagg cgggggtactt gccctggaac 360
ggcgactttg ggctcaagac gctgtggtac gccgagttcg gcaacacang gcccggcgcc 420

aacacggccg ggcgcgtcag ctg

443

<210> 3594

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G2

<400> 3594

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gaggtcctct tccagccttc cttcattggt atggaagctc ctggcatcca tgagaccacc 120
tacaactcca tcatgaagtg cgatgtcgac atcaggaagg acttgatgg taacattgtg 180
ctcagtgggtg gcacgaccat gttccctggt attgcggacc gtatgagcaa ggagatcact 240
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gtctggatag gaggatccat ccttgctcc ctgagcaact tccaacagat gtggatctca 360
aaagctgagt atgacgagtc aggacctgcg attgttcac ggaagtgctt ctaagctctg 420
gtccccctt cggc 434

<210> 3595

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G3

<400> 3595

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gcaaaggccg gacctccatc tcccacgagt ccgcctcttc cgacaacgcc gagtccgccg 120
cgttcacctg gaactcggac aacgtcatcg tcttcggcgt cagcttcagg aacagcgccc 180
gcgtcggcct ggtgaacgac ccggagatcc gttccgtggc ggcgatgggt gccggcgaca 240
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gccgccacta ctacgagagc tgcgatatcc agggcaacat cgacttcac ttcggcagcg 360
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gcagctccat catcgcgcat gtgc 444

<210> 3596
 <211> 472
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G5

<400> 3596

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 tccgcccacg cgtccggata gcgagcaccg ggcgtcgggc gacggtggcg ccatgggtgg 120
 ctgccactcc gccatcgagg ccaccaagct gaagattctg cgccgcggag gccggggtgc 180
 cgctgccgtc ctccccgtca ccaaccacga cggcccgtgc tgctcctccg accacggcag 240
 caaggagaag aagaagaaaa agaaggcgcg caggaagggc aggaaacgcg cctccatcct 300
 gggcgacgcc ggcaccttcg acccggactt ctgcggcgcg taccggctcg gcgcggagct 360
 cgggcgcggc gagttcggcg tcacgaggcg gtgcgaggac gccgccacgg gggaggccct 420
 ggcgtgcaag acgatccggc ggaagcggct gctcctgcgc ctgcgcgggc gc 472

<210> 3597
 <211> 403
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G6

<400> 3597

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 ccgcctccgc ccagcttggg ggtgtgcgcg gcaaggaaga gacatcgacg tcggcgccag 180
 ctttcgcgcc ggatagcaac aagaaaagggt ggaggaagag gaggttcttg agaaagaaga 240
 tgaaggccag gaaggagatc ggcgggctgg tggacctcgt caacgatatt tcggccaagt 300
 cagaggagag cctaagggtt agcaacaaaa acatgcccgag cagggcgctg acgttcagtc 360
 agctgagcgc cgcaacggac gggttcagtt cgcagaacct gct 403

<210> 3598
 <211> 356
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G7

<400> 3598

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cactcgcgta cacgcgcata aagtatcgct ccagaaacac tatggcgcg cagtcacccg 120

tccgcctcag cgcagcgtcg ggctcatgcc gcatggcgcc acaagccgcy ggtgtccacc 180

actgctgtgg ccgcgctcga gtaccgacct cgcgacctga ctgggagatt cagggtcacgt 240

gcatgacgc gaagatacgc gatgcgctcg atgctgcata tcatcaccgc aatttgcgcc 300

acttcaaagg agaacctacg ggttacgacg aagagcatgc cgagcagggg cctgac 356

<210> 3599

<211> 111

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G8

<400> 3599

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acgggtcccat cggtaggtca cacgcgtaca cgcgcataaa gtttcgctcc a 111

<210> 3600

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-G9

<400> 3600

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acgacaagat caacgagaag atccatgagt ataagcactc gtcgtcgtcc tcctcctctt 120

cggactcaga cgatgacaag aagcccaaga agtctaagaa gaagaagctt tttggaagaa 180

aacatccatt gcatcatgtc ctccgaggag gcaaagccgc cgaccttgty ctgtggagga 240

acaaacaggc atctgggagc atcttggtag ggggtgaccgt gatctgggta ctgttcgagg 300

gcatcggcta ccacctcctt accttccttt gccacgcact aattgtgttt ctcaccatct 360

ggttcacatctg gtccaatgct gcgtcatttg tcaacaggtc acctccaaag ttcccagagg 420
tcat 424

<210> 3601
<211> 464
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H1

<400> 3601

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aggggacgca cgggcaggca gccatgaacg gcatcaacct caacggcgagg ttctgtcgt 180
acgggaacat ggagagctat gcgatgtggg tggcgaccgg cgtggcgctcg gccttcttcg 240
cgteccctcga gcgctgctcc tgcattccacc tccacaccgc ggaggacgac ggcgacgagg 300
aggaggagga cctcgaggag gcccgccgct ccttctcccg cccgatccct gactactact 360
acgaccggtc cggctcctcc gcctccgctg ccaagatgtg acctgaccga accgcgcctc 420
tctccgcca agaaatgcgt ggtgatacca atcgtttctt gatc 464

<210> 3602
<211> 425
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H10

<400> 3602

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cgctggccaa tgggacgccc tcggcgctcg tccggctccg caacgggagc ctgaacgcgg 180
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ccaccgtcgg cgcctacgtg cccgacggcg ccgggggctt ccgcttcgag gacttcgaca 360
agctccaccg cgcgctcggg gacgccttct tcggcgact gtgatgccag gacgacgcca 420

ccgcc

425

<210> 3603

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H11

<400> 3603

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tgctgctggt cgcaacgggtg tcgcctgccg cgcgcgcggc ggcggtggcc gtggcgggag 180
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gggtacatca gatcgatc gcgccgggca actacctgac ggcggggctg gaactgaacg 360
gcccctgaa gtctccatc agcatccgct tcgacggcaa cctgctcgga accggagacc 420
tcagcgcgta c 431

<210> 3604

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H12

<400> 3604

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ctgatcattt ggggggagca ggatcaggtc ttcccaatgg agctggcgca taggttgag 120
aggcatcttg gggagagttc tagattagta gtcgtaaaaa acgctgggca cgcggccaat 180
ctagagaagt ccaaggaggt gtgcaagagc atcattgact attttcagga accgggttca 240
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taggacatcg tcctgtgatt ggcccgcagt tttgccgttt ccttggcaac ttgtaattgt 360
aacaaaagaa cctttgtaat cacacggacc atacaagtct cctgtaaatt gtctgaaggc 420
tttctgcgct caaagaaaca cact 444

<210> 3605
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H2

<400> 3605

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gccaaaaaca atcctgacaa ggtggccact ctaatactgg aaaatacatt tacatccata  120
ctggatatgg ctggtattat gcttcccttc ttaagatggg tcataggcgg gagctcttct  180
aaagggtcaa aacttttaaa ctgtgttggt cgctctccat ggaatacact tgatattggt  240
ggagagggtca aacaacccat tctcttcctt tctggattgc aagatgaact agtccccctt  300
ccacacatga agatgttata tgacaaagct tctgatcata acagaaattg cagatttggt  360
gattttccta gtggtatgca tatggatacc tggatgtctg gaggggaccg ctactggagg  420
acaatc                                           426
```

<210> 3606
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G10

<400> 3606

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aaacctgaaa ttccgtgtta gcagtaacct gatcaagtta cactacaact agcaatacag  180
atttttctca agccttggtc acatatatat tcaagtgcaa aaaggagatc gatacaacac  240
catcccggct cttacaactg gcaggccggc caacgcgcac gcggctagtg cccgtgcttg  300
tgcgcgtgct ccggctgggt gacgacgacg aagatgttga gaacgttgtc gacgaggcgg  360
tatacgttcc gctgcatggg caagaagggg gacctaatacg ccgggaagtc ag           412
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<210> 3607
 <211> 442
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-006-Q1-E1-G11

<400> 3607

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aacagggtctg aagagaagcg ctcgacgtgg tgcagggtctg tcatattctg tgggtgtagtt 120

caagcataag ccattacagg gaggtcgtc ttcaggatgc aagccttttc attatgatga 180

aggcatacga gatgaagggtg taatctaagg atgacatgaa taaacgccga agctaccgcc 240

agatcgatag cttcgggtca tgatgaagat gaagtatgat ggtgatgctg accgaagggg 300

aaaaaagact atttagtcct taataatttg tattttgatc ataagtaaatt attggggata 360

taaatgtact tttacctgng cttggggtgc gtncgtgcc tataaatagg tgaacggtag 420

caacatactg ttcacactga tt 442

<210> 3608

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G12

<400> 3608

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ggacggattg gtaggcctct tgaaagttcg cgtgggtccg ggtatcaacc ttgcctaccg 180

cgacgcaaga ggcagcgatc caaactgaag acaagcgtga agaagagatc cgtgaacccc 240

atatggcaag aggagctaac tctgaccgtc acagatccca gccaaacct gaagctggag 300

gtgttcgaca aggacacctt cagcagagac gaccccatgg gagacgcgga ggtggacgtg 360

gcgccactga tggaggcggt gagcatgaac ccgcgggagg agagtctgag gaacggcgcc 420

a 421

<210> 3609

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G5

<400> 3609

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cacgtttcag ttgtcgtgt cctacttttg ttccgggagt attgagagct tgtgttctgt 120
tcacgattga ttcagggtgt ttcttttgtt ttgcgtgttt ttttttcttc ttctttttat 180
cgctgagccg atatatatgc actggttctc ctctgaatat ggggtgcctt caccaggact 240
caatatgtgt aattcttttc tgtttcctgg tcatgattgt ctgtaaattg taaacattgg 300
gtttgatgga tatcgacact ggagtgtaaa gtgttggcgg ttaaatacac ggccctcttt 360
cctggctcag caaaaaaaaa aaaaaaggga gagaaaagaa gggcgggacc caggac 416

<210> 3610

<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G6

<400> 3610

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cgatgcgggc acaggttgcg atggttgtgg cgttgggtgtt cttgggtgaga ggcgcatggc 120
gcggtcctcc caaagtcctc ccaggcaaga acatcacggc cacctatggc aaggactggc 180
tggacgctaa agcgacatgg tatggcaagc cgacgggtgc cgggtcccgac gataacggtg 240
gcggctgcgg gtacaaggac gtgaacaagc ccccttcaa tagcatgggc gcatgcggca 300
acatccccat cttcaaggat ggtctgggtt gtgggtcctg cttcgagatc aagtgcgata 360
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ctatcgcggc gttacacttc gat 443

<210> 3611

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-G7

<400> 3611

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cgccccctct cccgatccgcc ggccccccga gagctagctg ctgatcggtc gaggagagtc 180
atggcgacgt cgacgatgcg cgttgccgcc ggcggtgctgc tggtcgtgtc ggcgctggcg 240
accttggccc gggccgagga cccctacctg ttcttcgagt ggaagggtgac gtacgggacc 300
aggctccctgc tgggagtgcc ccagaaggtc atcctcatca acggcgagtt ccttggcccc 360
aggatcaact gctcctccaa caacaacatc gtcgtcaacg tcttcaacca gctcgaccat 420
ccgctcctt 429

<210> 3612
<211> 441
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-G8
<400> 3612

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aggggaaggag ccattcaggt tgccctaccgt cagctgcctg acattaggaa gaccgaggtg 120
gtagaacgta catgaccccc gcgtcgtcag ggaagtatat ggattattac aggggggcttc 180
ggcttcggca taaaggctct ctcttatggc aaagacatac aatgtgaaga tgtaaccgca 240
agggtgataag aatggtcacc gaagggtgtag ccgaaagagc ttcggcttaa tatgatgacg 300
aagaccaa atgatgctga ccgaaagggg gaagaagact atttagtcct taatgattca 360
tgttatgata ataaatagat gtcagggaca taaatgtact tttacccggg ttgcatctcg 420
tgtctataaa tagatgaaca g 441

<210> 3613
<211> 208
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-G9
<400> 3613

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aaggaagatt catcgggcat caatgcgaca gcgtccgagt ctgctgggtc gttcaagatc 120
accacattgg gcacctccgg aaatagcaag acagagagca ctaaagctgt gcaagaggca 180
tgggcatcag cgtacggctg aactggga 208

<210> 3614
<211> 428
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-H11
<400> 3614

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aggtcctagc ctgcacagat atagaccacg agcaagcatc ctacacttca tatgacggaa 120
ttctgttcaa agctgatgca ccacaccggc aacgagctct tgcagcggac gcaataacct 180
gccggaaatt cgccgagcgg gcttacaagt acagaccact caaagttgtt gagtttgatc 240
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ttctgcagg gcggatatac tcgcaagcct tccaccttgc agggcagggt ttcttcctct 360
cagctcactg taacatggag cagcaaagcg cgttctactg cttcgggctc ttctgngga 420
tgcaagag 428

<210> 3615
<211> 405
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-006-Q1-E1-H2
<400> 3615

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tcggccgtcg cgctgctctg cctgtaccac ctctttttcc tctccctgtc cgtcccggac 180
ccggcagcag cagcagcagc cgtccccgc cgcccggtg gccaccgtgg cagcaacgtt 240
ccgtccgggt caggaaccgc caacgtcgtc ctccgcttcg gcctgtccgg gcagecgtc 300

cgctccacg acccgcgcg cgccgcggc ctcccgaca tcgacacctt ccgcggcaag 360
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<210> 3616
<211> 361
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-006-Q1-E1-H5

<400> 3616

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gccccacccg caggggtcgt accactacgg ccagatcaac atcaccgca ccatcaagct 180
cgccatgggc cgcggaagg tggacggcaa ggagcgggtc ggcttcaacg gcgtgtcgca 240
cgtcgacccc gagacccccg tcaagctcgc cgagtacttc aacaccaccg acggggtggt 300
ccagtacgac atcatcggcg acgttcggcc cttcaagttc ggcccaaca agattggccc 360
c 361

<210> 3617
<211> 421
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-006-Q1-E1-H7

<400> 3617

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aaagatgaag aaagtggcat catcgtcagc cgttctcttc gtgctagccc tgacgctagt 120
ttgtgccccg ctgatagcag aggcaaagaa gaagagagtc gccgccgcgc ccgccgagga 180
gaagaagggtg caggacaact tctgctcgac gctgtgcgag ggcaggaagg ggatggacct 240
ggtggtgtgc aaggagtcct ggcacctctc acagcgctcc aacctggtgc tgtacggccg 300
gattcagtgc aatggcaagt gcnacgagca gaaggcatc acggcgccgc atatgaaggt 360
gtgccaagag gcgtgcgaca aggactacgt ggtcaatgcg gctgaggtca ccaaggcctg 420
c 421

<210> 3618
 <211> 406
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-006-Q1-E1-H9

<400> 3618

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ccggctaccg gtgagctccg ccctgaggtg tggtaagggc ctgtttagg cattgagaat 180
gcaatcatgt catgagggca tgaataaggc tttcagacat gggcatcctt ctttgttcac 240
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taatatgaag ccgacgcttt gcctcatcta tgctcgtgca ttgatgtaac gtgtccttgt 360
ctgatattaa gaaaatatgg aatataagaa agaaaaaac gcctgc 406
```

<210> 3619
 <211> 435
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A1

<400> 3619

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gcggcgccca tcgaccccaa gtacaagaag acgatcagcg acgcgtgcga cggcaaggac 180
tcgggctccg tccccatgga ctccacctcg cccaacgacc tggacgggag ctacttcggc 240
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cggagcccat agtgaaggcc atgtcggaca agaccaccga cttcgtcccg atcttcgcca 360
aggccatgga gaagctcagc gtgctcaagg tgctcacggg gaacggaagg cgagatcagg 420
aagacgtgct ccgag 435
```

<210> 3620

<211> 376
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-A12

 <400> 3620

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 ggggtcgccgt gctagcgggtg gccgcggatg tcgccaacgc cggccacgcc aagcccctga 120
 cgcctggcgg gcgcgtggta caccacaacc acggcaagtt cacggccggg ccgtggaaac 180
 ccgcccacgc gaccttctac ggcggggcggg acgggtccgg caccacggcg ggcgcgtgcg 240
 ggtacaagga cacgcgcgcg caggggtatg gcgtgcagac ggtggccgtg agcacggtgc 300
 tgttcggcga cggcgcgcc tcggcggggt gctacgaggt gcgctgcgtg gacagcccca 360
 gcgggtgcaa gccag 376

<210> 3621
 <211> 442
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-A4

 <400> 3621

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 gaaagcgtcc gggcctgggt ggtccttcga catcaccaag ttgggcgcct ccggcaatgg 180
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 gaagcagaca atcctcatac ccaagggcga ctctcctgtc ggacaactca actttacagg 300
 cccttgcaag ggcgacgtga ccatccaagt ggatggcaat ctgctggcga ccacggacct 360
 aagccagtac aaggacctg gtaattggat cgagattcta cgcgtggata acctgggcac 420
 caccggcaag ggaaaccttg ac 442

<210> 3622
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A7

<400> 3622

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cctcgcgcgtc gctgccctca gcgcggccga ggcaccggca gagtcaccga aggcaggcag 180
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acccgagttct gctgccacga gaactgcccc cgctaaggca cctcaagccg cctccacccc 300
cgccgttgcc gctgccccat cgtcgtcgtc gtctaggaag tctgggtccag ctgccgcgcc 360
gaccaccgcc gcctctacac cgtcttcttc caccgacgag gatttgagcc ct 412

<210> 3623

<211> 466

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-A9

<400> 3623

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gcaccggtgt cgcttgccgc gcgcgcggcg gcggtggcgg tggcgggagg ggcgccgtcc 180
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atcgtcatcc cgccgggcaa ctacctgacg ggcgggctgg agctgaaggg cccctgcaag 360
tcctccatca tcattcgtct ccacggcaac ctgctcggca ccggcgacct cagcgcgtac 420
caaacgaact ggatcgagat cgacatcgtc cagatcctgt ccatca 466

<210> 3624

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B11

<400> 3624

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 tcgtctccac tgcgtccgct gcacggaccg tgggcgacac cgtgcaggac gcgtgcagca 180
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 agcccaccga cgccaa 436

<210> 3625
 <211> 435
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-B12
 <400> 3625

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 ctgctgctcc tcgtcgtcgc cgtcgtcctc tccaacgtcc cctctctggg cgccttggcc 180
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 gagaaggagc aggagatgga gaaggcggtc gggcgaggaga aggctgcccc gcaagagctg 360
 ctcaagtacg ccaaggagaa aggcacgtg tcaccgacca acggcacggg gtggtacaag 420
 ggcatcgccc gggag 435

<210> 3626
 <211> 448
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-B2
 <400> 3626

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 tcgaggtgga cggcgggtac cgcttcacgt accgccgcag ggtccacggc aacgtcgcgg 360
 gcggcagcat ccggaacctc ggccggcgtct ccgtcaggat gtctctcttc gactggagca 420
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<210> 3627

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B5

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 tgaaggcggc ggccgtggcc gcgctgctgc tggtcgcagc ggtgtcgctt gccgcgcgcg 180
 cggcggcggt ggcggtggcg ggagggggcg cgtcgggtgc gccgggtccg ctggacatcg 240
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 ggaagaacgc gtgcgaggcg acgggggtac agaagatcgt catcccgcgc gggcaactac 360
 ctgacggggc ggctggagct gaagggcccc tgcaagtcgt ccatcatcat ccgtctcgac 420
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<210> 3628

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B6

<400> 3628

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ctccgcccac cagaaagaca tccacgtcct cggcagcgtc gacggctcca gcgacggcag 180
cagccccgag tccgaaggcc gcgctcgtcta cgcggacatg aagctggctg atacggaatc 240
cgatgcgccc ggcggggcgc cggcgccggg gccgtcgtcc ggttgaactg agaagcgtgc 300
gtccagccaa gcaaggtggt caaaaccgag aactaattaa gggctcgatc gtgtgtcagg 360
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<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B7

<400> 3629

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tcatggaccc gctcaggetg tcgtaccagg cgcggatgca cgcgtcgcag aacaagcggc 180
tgccgctgca ggccgtgctc agcgtgtctt actacgacca gctgaagatc cgtagcgcgg 240
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catcgtcgtc atcgttggtt ccaggcccag cg 452

<210> 3630
<211> 465
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-B8

<400> 3630

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tgacctgaag gagcatgtca tcaagcctgt catccctgag cagtaccttg acgagaagac 180
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 ggctgccaag agcatcgctg ccagcggcct tgctcgccgc gccatcgctc aggtgtctta 420
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<210> 3631
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 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-C1
 <400> 3631

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 aggtccctgt gtgggctttg tgagagcgcg cggcatgttc tgcattttgt cacaaccatt 180
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<210> 3632
 <211> 394
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-007-Q1-E1-C10
 <400> 3632

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 gttcaagagg gagctggagg gcatccagct ggagctgcag gccaccgacc ccagcgagat 180
 gagcatggac attgtcaggg cgcgagctct ctgaagagga agacgcgcat ccgctcgcg 240
 gatcgccatg catgccccgg aacgacagaa gctgtttgtc ttgcatcgac cggcggcctc 300
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 aactactcta gacagtgcc ggtgagtaca gctg 394

<210> 3633

<211> 424
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-007-Q1-E1-C12

 <400> 3633

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accgcattcc ccgagttcaa gcccaggagg atggctgcca tcatgaagga ttctgacgag  180
ccggggcacc tcgccccgac cggcctgata ctgggaggca ccaagtacat ggtcatccaa  240
ggcgaacctg gagctgtcat ccgtggcaag aagggatccg ggggcatcac tgtgaagaaa  300
acagggcagt cactcatcat tggcatctac gacgagccga tgactcccg gcaagtgaac  360
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cccc                                              424
  
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<210> 3634
 <211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-C2

 <400> 3634

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ctagtccaga atccagatcc agcgcccgca tctctctctc tcgcgcgcgc gcgcgagcgc  180
gatgagctgc cgcgacgggc gatcgtgcta gcgtaacag cgagcggtgc gcgagggcgg  240
agtgggagtg tggatccgag gggcggaaca tctggcaagc gccgcggtgg ggctgcgggc  300
gcgggggagg gcggggggct gggcggaacg cggggaggga ggggaggact gcggtgaagct  360
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 <211> 431
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C5

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agctccctcc ctcccagcca tggcgacgcc ggacaacaag gggcacgggc atccgctgcc 180
caagtttggg gagtgggacg tgaagaatcc ggccacgtcc gagggcttca ccgatcatatt 240
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aggcattccg cgggccttca ggaacggcgg cggcgacggc ggttacaggc ccgacttcgg 360
cgacggcaac cagtacacgc cgcccaaacg gaacaagtgg gccttctgtg gctgctgaat 420
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<210> 3636

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C6

<400> 3636

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gggcccgcag aagtgctcgg ggcgggtggg cgagtgcgac gtggacgagg cggaggagct 180
cgggctgagc ggcggcggcc tcggctccga cgacgcggtg cggcggacgc tggcgcagcg 240
gaagccgacc aaccggtaca tcagctacgc ggcgctgcgc gcggaccagg tgccgtgcaa 300
caagcgcggc cggtcctact acagcaactg cgaggcgcag aaggccgcca acccctaccg 360
ccgcggctgc tccgccatca cgcgctgcgc ccgcaacatg aactgagccc agcgtagct 420
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<210> 3637

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C7

<400> 3637

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tgctagcggg gccgcccgat gtcgccaacg ccggccaagc caagccccca aagccttgcc 120

ggccccttgg aaaagaacaa caacggcaag ttcacggccg ggccgtggaa acccgccac 180

gcaaccttct acggcgggcg tgacgggtcc ggcaccacg cgggcgctg cgggtacaag 240

gacacgcgca cgcaggggta cggcgtgcag acggtgccg tgagcactgt gctgttcggg 300

gacggcgcg cctgcggagg gtgctacgac gtgcggtgcg tggacagccc taccgggtgc 360

aagcccgacg cggcagcgct ggtggtgacc gtgaccgacc tgtgcccgcc caa 413

<210> 3638

<211> 408

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C8

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ttacacagac ttcttttgtt ctatgctcca tacaaggaat tgtggattca tcttccgagg 240

gtcgtagact ccgatcaatc caaattgata tgtgttttct tggatcaatca tggttggatt 300

catcttccga ggatctagac tccactaaga ctgtcctttg acaagctgga cgggtgtgac 360

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<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-C9

<400> 3639

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ccctctggcc tegctgtcc tcccccttc ctccccccac atgcgtgcc ccgcccggc 180
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tgccggggaa agcgcaagaa gctcagcaga aatggcggag caggcaggcg ccggaaggta 300
ctggtgccac atgtgcgccg cggctgtgag ccccgcgag ggcgaggcgg aggtgaagtg 360
cccgattgc cacagcggct tccttgagga gatggagacc gtcccgggca cggccgcggc 420
cgatgacggc ga 432

<210> 3640

<211> 455

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D1

<400> 3640

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ccggcgggagc ggccgttcgc tgcgcagggc cggcgccggc ctgctgtct tctagcagga 180
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tcggcaaggg cggggggggc tggctctgcc tgcgggcgca ccgcgagggt ggacgcctcg 360
tgctgcggca gatgcgctg ccgtcgcagg agctgctgca gccctgcaag gaggacggca 420
ggttcaagct cctcatgcac ccggaggccc gcgcg 455

<210> 3641

<211> 402

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D10

<400> 3641

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agtcttcagc tcctggtgaa gtgatcccta catgcaatgg aaggcattgt ggagacacat 180

ggacacttcg cgacaaaaaac aagcctatgc tttggactga gaattggact caacaattca 240
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gattttttgc aaagggtggg tcattgggta actactacat gtaccacgga ggaacaaatt 360
ttggaaggac tggcgcttct tatgtgctga ctggatacta tg 402

<210> 3642
<211> 430
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D5

<400> 3642

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ttcgacgccg 430

<210> 3643
<211> 459
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-D6

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tgtcgtcggc gggtcgtgcg ggccccgaa ggtgccgccc ggccccaaac tcaccaccaa 180
ctacaacggc aagtgggtca ccgccagggc cacctgggtac ggtcagccca acggtgccgg 240
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catgacggcg tgcggcaacg tccccatctt caaggacggc aagggtctgtg gctcatgcta 360
cgaggtgaga tgcaaggaaa aacctgagtg ctctgggcaat ccagtcacgg tgttcacac 420
agacatgaac tacgagccta tcgctcgcta acatttcca 459

<210> 3644
<211> 439
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-007-Q1-E1-D8
<400> 3644

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acaccaagcg cgtgatcctg gatctcaagc ccggcgctca gttccgcgag aagctgttcc 420
tgaacatcag caagccgtt 439

<210> 3645
<211> 442
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-007-Q1-E1-D9
<400> 3645

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caataaacta actacgaatc ggggtaccagc tcggaatagc ccagggaatc ctgtacttag 180
gcattcacgg agcttgctg aaactggccg aggagcaata cagaaggtct catcaattac 240
agagaaacta tcccaaagt ctgtgacctc tagaacacgg agcgctgtga agcctgctgc 300
cccatgatg aaggccggac atggcaagtc ggactttctt ggggaagtctg acgatatccc 360

tccagcaaag aggctgacaa gaaaattggg cagctaaatg aggggtatgtg gagtgaaaat 420
tcgattagct gcaggaaggg tg 442

<210> 3646
<211> 209
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E1

<400> 3646

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaacgaaaaa gaaaataaaa 120
aaaaaaggaa gaaaaacaaa aaagctacaa aaatcaaata aaaaaaaaaa aggggggggcc 180
gcccaaaagg ttcaaacctt aattaccct 209

<210> 3647
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E12

<400> 3647

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caccatggat gacgtcaacg tcgagtatag tggcaccaac aacaagacca tggctatatg 240
cacgaacgcc aagggcagca ccaagggttg cctcaaggag cttgcatgct tctagaccct 300
cagtcgactg acccatctct ctagttataa tttttctctc gtccttgaat tgtccattag 360
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<210> 3648
<211> 457
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E5

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cctgacgcct ggcggggcgc tgggtacacga caaccacggc aagttcacgg ccggggccgtg 180

gaaaccagcc cacgcgacct tctacggcgg gcgggacggg tccggcacca cggcggggcgc 240

gtgcgggtac aaggacacgc gcgcgcagg gtacggcggtg cagacgggtg ccgtgagcac 300

gggtgttgttt ggcgacggcg cggcctgcgg cgggtgctac gaggtgcggg gcgtggacag 360

ccccagcggg tgcaagcccg acgcggcgcc gctggtggtg acggcgaccg acctgtgccc 420

accaaggac aagtgggtgca agccgccgca ggagcac 457

<210> 3649

<211> 435

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-007-Q1-E1-E6

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cttcgagagg aaagggttct accgcaaggg gatgaagtgc atgaacgtgt agaggtcctt 240

cgcgaggag cactacgcgg gggggggcgg caacgcgtgg gttggcnngt gtggtngagc 300

gggtgattgc cggccccgtg ggggctgggg tgtgggaggg gaaggacgtc gtgttgactg 360

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actacgccgt ggaag 435

<210> 3650

<211> 433

<212> DNA

<213> Zea mays

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ccccaacgtc tccgtgaagg gctacgacgt gatcgaggag atcaagacgg agctggagaa 360

gaagtgcccg aacgtggtgt cgtgcgcgga catcatctcg gtgagcgccc gcgactcgg 420

gaagctgacg ggc 433

<210> 3651

<211> 299

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-E8

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atctcgttct ggttcgggtg taagaaaatt taatcgtggc ctttgttgca ggatccaact 240

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<210> 3652

<211> 202

<212> DNA

<213> Zea mays

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<400> 3652

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agtctatctc cagcataagg aatgattatg ctgcacgatg actggccggg gtaaggagta 120

ggcgtctgtt tgcccttact agcagggttt ccaggggggtg cttcctatag ctctccactt 180

gcgtgagcgg cgacatggat tt

202

<210> 3653

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F11

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tataggctat gactatgaga agtgcattgg cctaaaggta aaaccaagga agggtgacgg 180
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gtagaaatcg aaaggctcag gtgtcatgtg ccctccaaaa aaatagatca tgcgcacata 360
tactgacat atacttcagt gtttgttcaa ttgccatgga cagttggacc aacggaagga 420
aagtgttaacc aatct 435

<210> 3654

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C5

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<210> 3655
 <211> 456
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C6

<400> 3655

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cagtggcaga cgcggcgaat acttgaggat ccctgacgac gtggaggtgg cgtcgaacgg 180
ggaggcagat gccgcggcgg ccatcacagt ggccgtggca gcggaatgcc tgaaggtgct 240
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ggctcggagc tgctgccgtg gacttccacg gaacgctcgt tattacaaga gttgttgac 360
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gcacagtcac cttattccca actgttgtgt taccat 456
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<210> 3656
 <211> 453
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-C8

<400> 3656

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tccctctctc gccgcggatc cccactact ccggtagaaa atggctgacg ctgaggatat 120
ccagcccctc gtctgcgaca acggaactgg catggtcaag gctgggttcg cgggcgacga 180
cgctccgagg gccgtcttcc ccagcatcgt tgggcgcccg cgccacaccg gtgtgatggt 240
ggggatgggg cagaaggatg cctacgtcgg cgacgaggcg cagtccaaga ggggtatcct 300
gacctcaag taccocatcg agcacggaat cgtcagcaac tgggacgaca tggagaagat 360
ctggcatcac accttctaca acgagctccg tgtggctccc gaggaacacc ccgtcctcct 420
cactgaggcg cccctgaacc caaaggctaa ccg 453
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<210> 3657

<211> 422
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-D10

 <400> 3657

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 tggccgtgcc gtacgagcac tggacgacgc cggggcacca catcggtcttc atcgtcatgt 120
 acggcctcac cttcttcttc gccaaacttcg ggcccaacgc gaccacgttc atcgtgcccg 180
 cggagatctt cccggccagg ctgcggtcga cgtgccacgg catctcggcg gcgtcgggga 240
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 ccaagacgga ccacgggtac cccgcgggca tcggcgtgcg caactcgtg ttcctcctcg 360
 ccggctgcaa cctgctgggc ctggcattca cgttctggt gccggagtcc aagggaat 420
 cc 422

<210> 3658
 <211> 353
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-D11

 <400> 3658

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 agaaggtcac gtacgtggtg gaccccagcg gcaagggcga ctacaccaac atcaccgcgg 120
 cgctggagga tatcccgggtg agcaacacca agcgcgtgat cctggatctc aagcccggcg 180
 ctcagtctcg cgagaagctg ttcctgaaca tcagcaagcc gttcatcacg ttccggtcgg 240
 accccaagaa gccgcgcgtc gtggtctgga acgacactgc ggccacgaac ggcaaggacg 300
 gcaagccggt gggcacggtg gggagcgcca cgctggcgggt ggagtcggac tac 353

<210> 3659
 <211> 321
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-D12

<400> 3659

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tcagtcggtc ctagagaacg tgcacacagt gcacatcgat aaatgatata catcgacaag 180

caagtgatgg agatggattt cgacgtcggc atttactgta gctgcatcgc cgtcgtcctc 240

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gcacgactag cgcccttgag t 321

<210> 3660

<211> 464

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D2

<400> 3660

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tcccggaggt gtgcacgtcc accgcggggc ggcacgcgtc caagtaccgc gtcacgcaca 120

acctggccgt gctgaacatg caggtggacg cgttcgccaa ggcacccgcg caggcgcgca 180

agcacgtcgc gaggtcggcc cgcaccatcc cgccgcagca gacgcaggcg ctcaagtctt 240

gcgacaccat gtacatgaac acgcaggaca ccatcggcgc ggcgcagcgg gccatcacgt 300

tcaaggacac cggcaccgcc aagatcatgc tgcagctcgc cgtccaggac ttcgactcgt 360

gcgaccgccc cttcaccag gccggcgctc ccaaaccat ggggaagttt gacaaggagc 420

tcaaccagat ggccaacaac tgcattggctc ttgcaaakat gata 464

<210> 3661

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D3

<400> 3661

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cacgatgagg gcgcctctcc tctcctcgtc cctcgtcctc gccgtcgtcg ccaccgtgcc 120

tctactagtc ccggcggtgt gcatctcgcg gcacgacaag tccgagagca aggctgacga 180
agaagctgct gctactaccg ttgccgccga cgagcatggc tctgtcaaga ccatgtccct 240
cgacgcatac gggccactgg agatggccgc caagaagccc aaggagcagg tcctgaacgc 300
gcaagctacg ccggcgacga ccgctggcgc tgacacatat gaccagaaac ccgttggtga 360
aaaacaggct gaaacggcca cggcctccgc tgccgatgaa caaccgaca aata 414

<210> 3662
<211> 452
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-066-Q2-E1-D4

<400> 3662

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aactcgtcgt ccggcctggc ggtgagcgac gagtgcagg tgaagttccg ggatctgaag 120
gcgcggcgga gttccgggtt catcgtgttc aggatcgacg acaaggacat ggagatcaag 180
gtggaccgcc tcggcgagcc gaaccagggc tacggcgact tcaccgacag cctccccgcc 240
gacgagtgcc gctacgccat ctacgacctc gacttcacca ccgtcgagaa ctgccagaag 300
agcaagatct tcttcttccc ctggtcccct gatactgcac gcacccggag caagatgctg 360
tacgccagct ccaaggacag gttcaggang gagctggacg gcatccagtg cgagatccag 420
gccaccgacc ccagcgagat gagcctcgac at 452

<210> 3663
<211> 467
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-066-Q2-E1-D6

<400> 3663

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taaggaaagg tcccgcctt ttctccgac atccacaggg gggaggggaa aacacgtgca 120
ttcaccggc ggcaataatg gcctcggttc cggtccggc gacgacgacc gccgccgtaa 180

tcctatgcct atgcgtcgtc ctctcctgtg ccgcgggtga cgaccccaac ctccccgact 240
acgtcatcca gggccgcgtg tactgcgaca cctgccgcgc cgggttcgtg accaacgtca 300
ccgagtacat cgcggggcgcc aaggtgaggc tggagtgcag gcacttcggc accggcaagc 360
tcgagcgcgc catcgacggg gtcaccgacg cgaccggcac ctacacgac gagctcaagg 420
acagccacga ggaggacatc tgccangtgg tgctggtggc cagcccg 467

<210> 3664
<211> 467
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-D8

<400> 3664

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gaggagagaa gataagagaa cgaggggcag ggcagccagc gccgctagct gaagcaaggc 120
agggcaagag aatccgtacg tcgaggactt cgacaagctc caccgcgcgc tcggggacgc 180
cttcttcggc gcactgggag gccaggacga cgccaccgcc gcggcggacg gcgcgggcgc 240
cggcgccggc gccgaggagg acgagcagga gatgcgggag gcgttcaagg tcttcgacgt 300
cgatggcgac ggcttcatct ccgcgcgtga gctgcaggag gtgctcaaga agctcggcct 360
ccccgagggc agcagcatgg ccaacgtccg ggagatgac tgcaacgtcg accgcgacag 420
cgacggccgc gtcgacttca acgagttcaa gtgcatgatg cagggga 467

<210> 3665
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E1

<400> 3665

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tgacggtgga gatggccggt ggcgcgaggc tagagccgga agccaagagc gtggtgatgc 120
cggaggtagt gcccggggtg gcgtgcctgg ctttaggaa gctgccgcgg ggagggcccg 180
ggatcttggg caacgtgctc atgcaggagt acatctggga gatcgaccac ggaaagggga 240

agatgagggtt caggaaggac aagtgcaaca cccatcatct ccacaacagc aaaggcggag 300
 aggtctataa taataataat ggcaattcct cctctactgt cgtgcatcgc gtcaattaat 360
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<210> 3666

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E10

<400> 3666

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 tgatgccaca gctgcgtagc ctcgtcgcgc tggtcctcgt ggccacggcc atagccgccg 120
 ctcccggcgt tgggtttgtc gtcaccggcc gcattactgt cgacaactgc cgcgccgggt 180
 tcgagacaaa cgtgtccac gccatccaag gcgcgacggt ggagatggag tgccgccact 240
 tcgagtcgca gcaggtccac gacaaggcgg aggcgacgac gggccccggc ggctggtaca 300
 ggatggagat cagcggcgac caccaggacg agatctgcga cgtgcgcctg ctcaagagcc 360
 ccgaggcgga ctgcgccgag atcgaccact cccgcgaccg ctgcgcgctc ccgtcaccc 420
 gcaacg 426

<210> 3667

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E12

<400> 3667

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 tgagcatcca gtgcaaagtg tgcatgcaaa cattcatgtg taccacgact gaagtgaagt 180
 gccgggagca cgcggaggcc aagcatccca agacagacgt gtaccagtgc ttcccccatc 240
 tgaagaagtg aaaggcctga acttagcaac cagtgtgtgt ttggtcacta cgatcggggc 300
 agggggcggt ccttgtgttg aggggtgttca ttccgtgtta ttttcccgtc agtcatgcgt 360

cctgtcctat gttaacctac ataagaaagt gatgtggtgt ccacttctag tgaaactact 420
gtctgccgtt t 431

<210> 3668
<211> 430
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-066-Q2-E1-E5

<400> 3668

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cttgccacgg caaaacacct tcgccggcga gagcatggcg atggcgtacc gtgtcctgga 120
ggtcaccctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc ggactcgcat 180
ctacgccgtg gcttccatct ccggattcga cctccgcac ccttcccaca gcacccaagc 240
agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc ccaccccggc 300
tgccgctgac acccgcggcc tcgcactcca cgtgaggctc cgcgcccagc gtctatacct 360
ggcgatcgc gacatcggcg aggtgtntgt gnccatcgac gacctcctgg ccggcgccga 420
caagggtggc 430

<210> 3669
<211> 330
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-E7

<400> 3669

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tcgtgattgg ttctgtcacc acccgtctca cttcgaggt cggcaaaggc tccaagcctg 120
gccacctggt cctcaccccc aacattgcc aatctccga agtggagatc aaggagcacg 180
gtggcgatga cttctccttt gagctcaagg agggcccggc cggcacctgg acgcttgaca 240
ccaaggcccc gctcaagtac cccctctgca tccgctttgc cgtcaagtct ggcggctacc 300
gcatcgccga tgacgtcatc cctgaaaatt 330

<210> 3670
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-E9

 <400> 3670

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 cgcccaacct ctgcggcacg cccagcccag gtagccctgg tgcgcactct agtaacgcct 120
 tggagtcattg gaagattttgc aaccaggag ataaccctct gcttgtgaag acaaggctca 180
 ggcactgggc tcaagtagtg gcttgttcag tgaagcactc gagctgatcc tcgtcagtgt 240
 tttattcacg ctcttcttcc atacataata cccgtacaag tggttgcatg ggcgatgaat 300
 tagtcgtgtc cgagtgaac tagatcaatt gaccttgttg ctcatctaa tgcgtccca 360
 ggtcacattg ttgtggacag atttaattag cgtcgggttg gc 402

<210> 3671
 <211> 406
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-066-Q2-E1-F10

 <400> 3671

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 gacagacgac gacaccacga gcccgaagaa gagagccatc gcggctgctg atgacgattg 120
 caagcctgcc gatgacgagt caacgtcgtg gaagcgctc gtggacggta tgcgccgct 180
 ccgcctccgc gggcagctgg agtactacc gccgccaccg ccgccaccgc cgctgggcca 240
 cgccgatgtg taccatgacg tgatcctccc gccgccgtcg caggcacggt tcggcttcga 300
 gatcaaggag gtgggcatga ccagccgcta cgcgtccgct gaggatctgc accagatgga 360
 cagcgaccag gaagaggggtg ctganggtgg cgatgacggt gacagc 406

<210> 3672
 <211> 378
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F12

<400> 3672

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agcgtcgtct ttgtcattgc cgctctcttc ttcgtcgcca tggtcgtagc accgatggcc 120
gaggcaaagt ccgccgatgc ccctgtggct gacgcgccag ccgatggacc tagcggggccg 180
gctgctgcac ctggccccca ggggtgtcgaa ggcctgtcag gcaatgagga tgacgatgat 240
gactccacca attgaggcca cacacgtcgg cccggttaaa tttggaacaa gacatggaag 300
aaaaatgaga gcaatgtctt taaaaccatg ataatgtgtg gtcattccact catccatgga 360
tacatccttg ctctccct 378

<210> 3673

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F2

<400> 3673

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gaggtggagg cggaggcgga ggccggtgca tcgtctgcga agaagaaccg tatccagggtg 120
tccaccaaca agaagccgct ctattttctac gtcaatctcg ccaagaggta catgcagaac 180
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gagatcctca agaacaatgg cctcgccact gaaaagaaga tcctcacatc aaccatcggc 300
accaaggatg aggcgaaggg ccggcttgct cgtaaagcca agatcgagat cctgctgtgc 360
aatcagaga acttcaacag catcatgtcg agcaagaagt ccgagcgccc gaagccgccc 420
gccgaggaag agataaggtg tgatctatcc gaacaacg 458

<210> 3674

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F3

<400> 3674

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 cgcgtggtac acgacaacca cggcaagttc acggccgggc cgtggaaacc cgcccacgca 180
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 cccgacgcgg cagccctggt ggtgacggtg accgacc 397

<210> 3675
 <211> 434
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-F4
 <400> 3675

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 tgcgcatggg ccccgacctc ttccaccggg acaactggcg gcgcttcgcc gccttcgtgc 180
 gccgcatgaa cggcgccggg tcgtgccggg aggcgcggga gcgggaggcg cacggcgctg 240
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 ggacgggacg ggacggaacg gaagcctacg atcgactgta catacagggg ttgggacttg 360
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 agagccagcg agca 434

<210> 3676
 <211> 189
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-F5
 <400> 3676

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gaagttttgt ttgcactttg caaaactgta tatecttctc agctgtctca ttgtaaccca 180
 ttcttttttc 189

<210> 3677
 <211> 424
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F6

<400> 3677

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 agaatctgcy gagggtcagt aagatggatt cagtctcacg acctgctgct gctgatgttg 180
 aggagtaacc agaaccagaa ccgccgtcct cgattctgat agattatctt ctagtatacc 240
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 gttttaatta agcattctag atgttatacc gcatgctttg tttcggtttc taatgtcgat 360
 aaatgggtggc cggatgctgg ttttcgtgct ccgagccggc caccaggaag aagacctgcc 420
 tgcc 424

<210> 3678
 <211> 444
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F8

<400> 3678

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 atgggggtccg cctccgcctc agtgatgacg accagcctgc tggcgctggc gctggcagcg 180
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 tcggtgctgg ctggagtcgt gcagaccgac ccccgctgcc tctgcatggt cctggacggc 360
 accgccacgt ccttcggcat cgccatcaac cagaccaggc cactggagct ccccgcgctc 420

tgcaaggtca aggcgcgcgc gctc

444

<210> 3679

<211> 367

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-F9

<400> 3679

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cgcgctcgac accgcgaaga cgcaatggta ccacttcacc gccatcgtgg tcgccggcat 120

ggggttcttc accgacgcct acgacctctt ctgcatctcc ctcgtagacta agctcctcgg 180

ccgcatctac tacaccgtgg aggggtccgc gacgcccggc accctcccg cgcacgtgtc 240

cgcgctccgtc aacggcgtgg ccttcgtggg cacgctgtca gggcaactcc tcctcggtcg 300

gctgggcgac aagctcgggc gcaagaaggt ctatggcatg acgctcatgc tcatggctct 360

ctgttcc 367

<210> 3680

<211> 374

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G1

<400> 3680

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ctccagcgtg gggcgcaacg acggcgggcg cgtcgccggc ctcgtaggct gtgggatcgt 180

gatggggacc atgtccaacg ccaacaacct gatgcaggac ctcaagacgg ggtacctgac 240

gctgacctcg ccgcacaccg tgttcacacg ccaggccatc ggcacggcgc tcgggtgcgt 300

cgtcaaccgg gtcattgtct gggccttcta cagggtgggt cagaacggcg acaccgacgt 360

cttcgacgcg ccct 374

<210> 3681

<211> 372

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G11

<400> 3681

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ggggcggcac gccgccgac ccgtggggcg agcggttccg gatcgcgcg gagatcgcg 240

cggcgctgct gttcctgcac cagacaaagc cggagccgct ggtgcaccgg gacctgaagc 300

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gtctggtgcc gc 372

<210> 3682

<211> 351

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-066-Q2-E1-G12

<400> 3682

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ttctttccgc catggaggct cggaggaagc ccgcggtgtg ctgtgccctt cttgtgctgc 120

tcacgtcgc ctccagcgca acggtgtcga ctgctcatga cgagagctgc tggaaggacg 180

acgaccacca ccctatctgc tttcccgaag actgctggc gacctgccag gatcacggcc 240

acgcggacgg ccgctgcaac tgggcatggt cgtggaggcc gtattgccag tgctgttgg 300

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<210> 3683

<211> 328

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G2

<400> 3683

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gcgaccaccg caaggccacc tcatggcacg ttctccccgc tgactggaag ttcggcgctca 120
cgtaccaggc atccaagaac ttogaagtag ccactttccc tctctttctt catcctgcat 180
atgcccacaa gcaaccatgc aaatgataac atgcatcatg catgcatatt cattctttcg 240
ctcatgcact ccaatatggg gccggagtta aaaaaatgta gatcaatgtg caaactcaaa 300
tgacatctta accagttgtg atcaaaat 328

<210> 3684
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G3

<400> 3684
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acaagttgtg tactgccaac ggcgctcca aggtcacctg caaggacgtc accttcaaga 120
acatcacggg cacctcctcc accccggagg ccgttagcct gctctgcact gccaaaggtcc 180
catgcacggg cgtcaccatg gatgacgtca acgtcgagta tagcggcacc aacaacaaga 240
ccatggctat atgcacgaac gccaaaggga gcaccaaggg ttgcctcaag gagcttgcac 300
gcttctagac cctccgtcga ctgaccatc tctctagtta taatttttct ctcgtccttg 360
cattgcccac tacatgccac ccattggtaa cgcacaacag ttaaacgaca gaca 414

<210> 3685
<211> 453
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-066-Q2-E1-G6

<400> 3685
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ggtcacgggt tggatcata cctcaggaac ctgttctctt tgaagggacc attaggagca 120
acattgatcc gcttgagcag tattccgatg atgaaatctg gcaggcattg ggccgctgtc 180
agttgaaaga agccgtagct tcaaaacccg aaaagcttga tgcttcagtc gtcgacaatg 240

gtgagaactg gagtgttggg caacgtcaac tgctatgcct gggccgggtg atgctaaagc 300
acagcagaat actgttcacg gacgaggcca ctgcttccgt tgattcccag accgatgctg 360
tgattcagaa gatcatccgg gaagactttg cagcttgtag cattatcagc attgcgcaca 420
gaatacctac ggtgatggac tgcgacaggg tcc 453

<210> 3686

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-G8

<400> 3686

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agcgcgggccg acctggcctc cggggggcagg aggtcgtccg gcgtgccggg gttcgtcatg 180
atgccgctgg acaccgtcaa ggagtgcggc accgcgctgc accgccgcaa ggcgggtgcag 240
gccagcctct ccgcgctcaa gagcgcgggc gtcgagggcg tcatgggtgga cgtgtgggtg 300
ggcatcgccg agcgcgacgg cccggggccg tacaacttcg cgggctacgc ggagctcatg 360
gagatggcgc gcaaggccgg gctcaaggtc caggccgtca tgtccttcca ccagtgcggc 420
ggcaacgtcg gcgactccgt cagc 444

<210> 3687

<211> 421

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-066-Q2-E1-G9

<400> 3687

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caaagatgga gtttgagttt gaaaggagaa gagtgacaaa agaagacatt agggagctga 120
tattccgtga gatattggaa tatcatccac aactgctcaa agactatata aatggcacgg 180
agaggacaac ctttctgtac ccaagtgtg tgcaccaatt taggaagcaa tttgctcatc 240
ttgaagaaaa tagtggaac ggacctgtga ttccaatgga aagaaaacat acttctcttc 300

ctaggtctac tattgttcac tcattctcaa ttctgtcaa ggaacaaccc cgtatcggcc 360
catgtangga aaggccttca tctgatgagt cctacaggaa tcctcgggag acagaacaat 420
a 421

<210> 3688
<211> 348
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-066-Q2-E1-H1
<400> 3688

gggtccaccc acgcgtccga atttcagcaa ggatatggag tacaccccct gcacagcaag 60
ttcctttgta tcccacatct cgctgctcga ggaagtcttt ggctggaggt tttgtcttta 120
cggagacttc ctggatcatct cttttgtcaa ctgcacttga ggatcaaccc acacttagtg 180
actgccttgc ctgggtcccat gctgtcagac attagagttg cccagtgtatt acactattac 240
agtgcagctg tagcacatctt atttgagcat ggtggatctg tttctctggc aacattccag 300
taatctttgt cttggtgcta atcagccagc agaagtttac atcaagac 348

<210> 3689
<211> 188
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-066-Q2-E1-H10
<400> 3689

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acggatctct cgggtgctaat tcgtgatctt gaccggtgga agcagatggg gtttgcatgt 120
ttgtttcatt cttgcattga ttgttcgttg ttaactagtg tatgatgaat cggtcgttaa 180
cgcttatt 188

<210> 3690
<211> 248
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-066-Q2-E1-H11

<400> 3690

cgcggtccgat cgaaaggaga accagcagcc tccaataaga gccagccaga gaaactaata 60

gaactctcgc cgccgccatc cgagcgaaca agccatccga ccccggtcccc aaggcaatcc 120

gccgccgacg taccaccatc accgcacgag cgagatggac atgaacacga tcctcttcgt 180

cgtcctcatc gtcacgccc cctccgccac cgcagtggcg ggctcaccga cgccgcgcgc 240

tcggggccc 248

<210> 3691

<211> 338

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H12

<400> 3691

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gaacggaagg tccattcttg gagactccat gtacaagatc ataaccgacg acgtcttcga 120

ccccaacgag ctcttcgagt ccgtggacct gtcgacggag cacaagatcg tggacctcaa 180

ggaccggatc gaggcctccg tcgtcatctg gcaccggaag atcagcaaca agctctcgtg 240

gggccccgcc ggcgtcagcc tggagaagcg ggaggagttc gaggagcggg cgcagaccgc 300

cctgctcatc ctcaagcaca gggtccccgg gatccctc 338

<210> 3692

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H2

<400> 3692

accacgcgt ccgcacacgc gtccgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 120

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aggggagaaa aaaaaaaaaa 180

ttgggggggg cctttaaggg tttctgtttt tttttaccct ttcttgaggt ttcaaaattt 240

tccattgggg gcccttattt ttaatcccgg ggccttggtt taaccctggg ttaccgggaa 300

aaacccgggt ttaccaatt ttacctttt tgaacgtatt ccctttttcg caaggtgggt 360
aattttccat tgggccccat tttttcccct tttcaaaaa 399

<210> 3693
<211> 368
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H3

<400> 3693

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ctcttgctta catgcatcag aggggctact ttcacgtga cctcaaacct gagaatctgt 120
tagttagcaa agatgtcata aagctagcag actttggtct tgcaaggga gtttcatcat 180
tgccgccata tacagaatat gtctcaactc gctggtatcg ggcaccagaa gtattgctcc 240
agtcacatctgc ttatgattct gcagttgata tgtgggcaat gggtgccata atggctgagt 300
tgttgacact ccacctcttc tttcctggaa ccagtgaagc tgatgagatt cacaagatat 360
gcaatgtc 368

<210> 3694
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-066-Q2-E1-H5

<400> 3694

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cccaagccga acgcgatcgt ggccaaggac ggtagcgggc agttcatgag catccagcag 120
gccgtggacg ccgtgccccaa gggccatcag gggaggtacg tcatctacgt gaaggccggc 180
ctctacgacg agatcgatcat ggtccccaat gacaagggtca acatcttcat gtacggcgac 240
gggcctaagc aaagccgcgt gaccggccgc aagagcttcg ccgacggtat caccaccatg 300
aagaccgcca ccttctccgt cgaggcgctc gggttcatcc gccagaacat ggggttccac 360
aacacggccg gtgcggagcg gcaccaagcg gtggcgctcc gggtgcaagg ggacct 416

<210> 3695
 <211> 431
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-H7

 <400> 3695

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 ttggtacggg agggcgagga aatggaataa gacggctatt ccaatcctaa tcgggacaaa 120
 gtttgatgac tttgctcagc ttcctcttga gatgcaatgg gccatcgta accaggccag 180
 agcatagca agagcgatga aggcgaccct cttcttctcg agcgcgacgc acaacatcaa 240
 cgtgaacaag atcttcaagt tcatcacggc caagctcttc aacctcccggt ggacgggtgga 300
 ggcgaacctc accatcgggc agcccatcat agacttctga cgaccccttc ctctaactag 360
 taactcggca acacacgcaa gacgaacctt ggtaaataac aagggtttac aaggtcctgt 420
 ccttccattc t 431

<210> 3696
 <211> 359
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-066-Q2-E1-H9

 <400> 3696

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 gccggggccg acgaccagtt gaagcgagga aggtggccaa aactgagggc cgggctacta 120
 tcttttgcta taactaaaga tagggcgaag tttaatttct ccaataaatt ctgtccgagc 180
 aaaaagtatg atgggggttt tagtcgagat ggtaaagtga tgacgcgcgt gtggaccaag 240
 accaagagtc atggcttgct gtacttggtg tttctgagct gcaacactca atcgactact 300
 aaactaaggt aataatatat atatatatga tatgcttaat aagatcatac acaatgcac 359

<210> 3697
 <211> 432
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations

<223> Clone ID: LIB148-059-Q1-E1-B1

<400> 3697

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gaggcggagg cggagacgga gacagagact gaaggcgaag cggaggcaga ggtcgaggcc 120
gaggtggagg tcgaggtgga ggcggaggcc ggtgcatcgt ctgcgaagaa gaaccgtatc 180
caggtgtcca ccaacaagaa gccgctctat ttctacgtca atctcgccaa gaggtacatg 240
cagaactacg acgaggttga gctctccgct ctggggatgg ccattggtac cgtggtgacc 300
gtcgtgaga tcctcaagaa caatggcctc gccactgaaa agaagatcct cacatcaacc 360
atcggcacca aggatgantg caanggccgg cttgtccgta aagccaagat cgagatcctg 420
ctgtgcaaat ca 432

<210> 3698

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B10

<400> 3698

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agcggctgca cgcggccttg ttcttcgtga tgggattctg gctgctggac ttttccaaca 120
acacgggtgca gggccccgca cgcgcgctga tggcggacct cgcaggcagc cacggacca 180
gcacggcgaa cgccatcttc gtgtcgtgga tggcgatcgg gaacatcctg ggctactcgt 240
cggggctcac cgacaagtgg cacacctggg tcccgctcct gcagacgagg gcatgctgcg 300
aggcgtgcgc caacctcaag gccgccttcc tgggtgcggt ggtgttctctg ggctgtcca 360
cggtggtgac catgatcttc gccgcgagg tgccgctgga cccggcggcg gcggcga 417

<210> 3699

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B11

<400> 3699

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 cccaaaggtt tatccagccc tctggatctg gtgttgactt gggattcttt tctcttgatg 120
 agcttttcgag ttcattcaggg gaagtattcc cacttggtgt ttatgcagaa gcatatccat 180
 ctccagagga aggtggcccc tcagtaaacg ccactcgtgc acagattact cttgctgttt 240
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 gcgtgaggta tgagctacag gaaatttttg gtcttgtaa ctccactgaa gcggatgttg 360
 ctgatgctga tgccgatgac acggggaatg aatgtgttat ctgcttgtaa gaaccaagag 420
 aactg 426

<210> 3700
 <211> 434
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-059-Q1-E1-B2
 <400> 3700

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 gagggaaggg ctccgcgtcg tgtcccttct cttcctctc ctccctctcc tctctccaac 120
 accccatcca tcagcgtgc cctccgcatt gctcttgatc ccatccagta catcgattct 180
 ccccccaaga tcaaaggccg gaggaggaag aaaggtagg gagtcggcca tgggatgctt 240
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 ctatgttctt atccctgctc atgtttataa ttttggacct agccggttcc cagccccaac 360
 ccctgtcatc tccactggca gagctcagcc aattgcaatt acgggcaatt catctggaag 420
 agctgaagga aatt 434

<210> 3701
 <211> 450
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-059-Q1-E1-B4
 <400> 3701

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cacagacaat gcgatgaaag ccttggtcct cctggtcctc cttctgcata gtgcatggtg 120
 agaaggaaga gtcaaagggc atcgatgcga aagcgtccgg gcctgggtggg tccttcgaca 180
 tcaccaagtt gggcgccctcc ggcaatggca agacagacag cacgaaggct gtgcangagg 240
 catgggcatac ggcgtgcggc ggcaactggga agcagacaat cctcataccc aagggcgact 300
 tccttgctcg acaactcaac ttacagggc cttgcaaggg cgacgtgacc atccaggtgg 360
 atggcaatct gctggcgacc acggacctaa gccagtacaa ggaacatggg tattggatcg 420
 agaatccacc cgtggataac ctggatcatca 450

<210> 3702

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B5

<400> 3702

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 actccttcac caccactgct gagcgggaaa ttgtcaggga catgaaggag aagctcgect 120
 acattgccct ggactacgac caggagatgg agactgccaa gaccagctct tctgttgaga 180
 agagctacga gctgcctgac ggacaggtca tcaccattgg tgetgagcgc ttccgctgcc 240
 ctgaggtcct cttccagcca tccttcattg ggatggaagc tgetggatc cagagacca 300
 cctacaactc catcatgaag tgcgacgtgg atattaggaa ggatctgtat ggcaacatcg 360
 tcctctccgg tggtaacct atgttccttg gcattgctga cagga 405

<210> 3703

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B8

<400> 3703

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 acgcggtgta caggcagggc cgcaacgggg acgccatcgg gccgctggag atccgggtgg 120
 tgcgcggcgg cacgttcgag gaggtgatgg actacgccat ctgcgcgggc gcctctatca 180

accagtacaa ggcgccgagg tgcgtgtcgt tcggacccat catcgagctg ctcaactcca 240
 ggggtggtgtc cagccacttc agcccggcgt gcccacgta cagcccgcac aagaagtgat 300
 gacctaatag cattggccgt cggagctcgg aggctggggg tcacggtcac gggccagact 360
 gagctactac acttctgcta gtactatata ttgctacttg ttgctctcta cagtgcgtgt 420
 c 421

<210> 3704

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-B9

<400> 3704

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 gaggaggccc tgaacgcggt gtacaggcag ggccgcaacg gggacgccat cgggccgctg 120
 gagatccggg tgggtgcgcg cggcacgttc gaggagggtga tggactacgc catctcgcgc 180
 ggcgcctcta tcaaccagta caaggcgccg aggtgcgtgt cgttcggacc catcatcgag 240
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 cacaagaagt gatgacctaa tagcattggc cgtcggagct cggaggctgg gggttcacggt 360
 cacggcccag actgagctac tacattcttg ctagtactat atattgccac ttgttgctct 420
 ctac 424

<210> 3705

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C1

<400> 3705

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 ggtgcaagt caagcgcaag gcagacaaac gcggcgagaa ggagagcaga gaagcccggg 120
 gccacatccg tgtggcctgc ggccggcggc gcggttacga acgcctcgtc gtctaaggat 180
 gtggccagca gggcagcaa atcgccatcc accgccgcgc agaagacgag gcctgctggt 240

gtcgagaagg cagcagcgtc ttctttctgta aagctgaaga cgaagcctca gaaaacaacg 300
gcaggagctg gaaaaactca agctgcacct cccgcccgtg ctctctctgg cacggtaata 360
gcaaagaaga gtacgggagc cgagaactat gtcccatcc agaagaacaa caaccgtgcc 420
ggcggcgaga ccaaca 436

<210> 3706
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C10

<400> 3706

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cgttcacctc tccttcctct cctccctgcc tgccaggag aggggaagtc agaggcacgg 120
agtggcgagc agcagacgca cgtgaaccat tgtagctgtc cctgtcgtcg tcgtcgtcgt 180
caacgaatcc acacaaggaa aggatggaga agaagccgac catcctcatg aacaggtacg 240
agctcggggc cacgctcggg cagggcacct tcgccaaggt gtaccacggc cggaacctcg 300
cgtccggcga gagcgtggcc atcaaggta tgcacaagga gaaggtgatg cgcgtcggca 360
tgatcgacca gatcaagcgc gagatctcgc tcatgcgcct cgtccgccac cccaac 416

<210> 3707
<211> 423
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C11

<400> 3707

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tcctcgccgt cgtggcgctg ctgtccgccg gcctcctccc gcaggcgctg ggtaagggta 180
ggggaggcag gggacacggg ggcgccgtca accgcaggt cgcgggcata tgctctcgca 240
ccccgttccc ggaggtgtgc acgtccaccg ccgggcggca cgcgtccaag taccgggtca 300
tcgacaacct ggccgtgctg aacatgcatg tggacgcgtt cgccaagcgc accgcgcatg 360

cgcgcaagca cgtcgcgagg tcggctcgca ccatcccgcc gcatcagacg caggcgctca 420

cgt 423

<210> 3708

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C2

<400> 3708

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ggatcctcca tgagcgccgc aacgacctgc agggcacagt agtcctcctt ttccagccgg 120

gtgaggaggt cggatttggc gccaagagga tggaggaggc aggcgccgtg gagaacgtgg 180

aggccatatt cgggttccac gtcacctgc tgctccccac cggcgtggtg ggctctaggg 240

ccggcccgtc gctggccggg tgcgggttct tcgaggcggg gatcaccggg ggtcggcggc 300

cacgccgctt cccccagaa catcatacac cccgtcctgg cagcctccag cgtcgtgctc 360

atcctgcaaa gcctcgtgtc gc 382

<210> 3709

<211> 195

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C4

<400> 3709

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ccctgggggtt acccatctta agccccttga aaaaaacccc cctttcgcca cctgggttaa 120

taccaaagat gccagcagga ttcgcccttc caaaaagttg cccaccctga atggcaaatg 180

gaactcccc tgtaa 195

<210> 3710

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C5

<400> 3710

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cggaaggggc aacaacgacg acgccgacgc ggagagcccg ggcgacgcgg ccccggcgtc 120

taacatgacg ccgcccgcga tgggtgcaggc gcccgccgcg tacttcccag ctcccgccgc 180

cgctccaacg gcccgggcgc cgccaagcc cgggtggcgg aaccaggcgc acgaggcttc 240

cgccgatgac tcggcgctgc ggctcgccat cacggggcag gcgttcgcgt tccgcgagct 300

cgccgcccgc acagaccact tcacgccgta caacctcgtc ggtgaaggcg gcttcttccg 360

ggtctacaag ggccggctag agaaaagcgg cagacggtgg catcaagcag ctggaca 417

<210> 3711

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C6

<400> 3711

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agccggtggg cacggtgggg agcgccacgc tggcggtgga gtcggactac ttcacggcgt 120

acggcggtggt gttccggaac gacgcgccgc tggccaagcc cggcgccaag ggcgccagg 180

cgggtggcgg gcggtgttcc gggaccaaga cgcagatcta caactgcacc atcgacggcg 240

gacaggacac gctgtacgac cacaagggcc tgcactactt caatggctgc ctcatccggg 300

gcagcgtcga cttcatcttc ggcttcggcc gcagcttcta cgaggactgc cgcacgagct 360

cgggtggtaa ggacgtggca gtgctgacgg cgc 393

<210> 3712

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C7

<400> 3712

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gatggcgacg ctccagaggc gggcgggcaa gcggcgacgg cagtcccag tcgaacgagt 120

ggcggcgctcg caccctagggc tccgtggtaa cgggtgattgt gcgaggcacg ataggcttcg 180
gcagtgcagg tgggtggccat gggacacgcg ggtagctccg acggggcgct gaggcgcggt 240
cgtctccagc ggtggtggcc acatgaggcg tggttggctc cgggtgcctt cgatgaccaa 300
ctccttcgat ctgatggcct cggcggcggc gtcctccgat gacctcctcc aattctttgt 360
ttatgcatgc ggctgttggg tgagcccata ctaatttttc 400

<210> 3713
<211> 285
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-C8

<400> 3713

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tatgcatct caaccaaagc gcggtgggtc cgtgcatgg cattagccat acatgcatcg 180
gcacttactg tcgagttgct gcgacaagcc gattactcca atgggtccgt gacgagcagt 240
catcgcgaca tcctccgtct acatcatcct cagctcgatc cagtg 285

<210> 3714
<211> 414
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-059-Q1-E1-C9

<400> 3714

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attgggtagc cctgctcaca ctggaaggaa gaggggatct cctaggactt ctgaaagcca 180
gcatgctata gcagaggcca aaacatatgg ggaaaattca agaggcagaa agtgaccaa 240
ctctcagagc agcattgacc gtatgagcag aatgctgaac cagatgggtc atccattcat 300
cattcataga aaaaaaaaaat gataagttcc ttgctagcgc cagacaggaa cattgcatca 360

gtccatctag gtcncttggg ctttgtgaat agagctttcc tcttttccct ttac 414

<210> 3715
<211> 441
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D1

<400> 3715

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tccgcccggc ttcaggaacg gcggcggcga cggcgggtac agggccgact tcggcgacgg 360
caaccagtac acgcccacca aacggaagaa gtgggccttc tgtggctgct gaatccaaac 420
ctccctgtgc tgctgtgctg a 441

<210> 3716
<211> 397
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D10

<400> 3716

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gcgcacgtcg ccccgggggt cacgtcacc accgagcccc aaccaattaa taatatatat 180
atatagctag gatcgatcgt cagtaaaatg gcaggctccg ccgtcctgag gagccccctg 240
tccgtcctcc tctacatcct cgccgccgtg cccgccaccg ccgeggcgac gccgaccgac 300
gccgccatcg acgaggcgta cgcgcatttc gtcaagctca ccgctaacca ggagtactgg 360
gcggagcgcg cggaggcggc gcacgcgtac aaccgcg 397

<210> 3717

<211> 239
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-D11

 <400> 3717

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 ctgaggcgtc gaacctatca gaagtcgctg tgtccgaagc tgaagaagca gtcgctgcac 180
 cgctcatcgc aaagcttgag gagaatgtca gtgcagccgt gacagatacc gcaatatat 239

<210> 3718
 <211> 405
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-D2

 <400> 3718

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 tctgcacgat gtgatggtea gcatcatcaa gatatacttc gccatggagt acgtccgggg 180
 cggcgaaactc ttcgcccgcg tcgccagctg tcggctcaac gaggacgccg cgagaacgta 240
 cttccaccag ctcgtcggcg ccttcgactc tctgccacag ccgctgcgtc tagcagcgcg 300
 accgcaatcc cgagaacctc ctcgtcgacc atcagggcat gctcaaagtc tccgatctcc 360
 gccgcagcgc tctcatgtag tgccagcatc aagatcgccct gctgc 405

<210> 3719
 <211> 401
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-D3

 <400> 3719

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 ccagctcatt tgcttcgccc gttcgccgtg cgtgcgctcg caaccaaga ctcgtttcct 120

tctttgtgct cctgttcgtt ccttccttcc ctggaaccct tccccgtaa gctcgccgct 180
gcgctgcgtt cggatggcag ttggaggcgg cgtgtgtgtg gcgtcgccct cgcgctcgtc 240
ggtcgaggcg tggtcgtgga ggacgagcgg ggcgcggcgc cgcgcggccg ttaggtgcag 300
cgtcgttggc gaggcggggc cgggcgcgcgc cggcgggcgg gtggaggacc cctaccggac 360
gctgcgtctg cgccgggggg ccacccgcgg cgaggtcaag a 401

<210> 3720
<211> 403
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-059-Q1-E1-D4

<400> 3720
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ttangaagct gccgttccag aggcttgtca gggagattgc tcaggatttc aagacggatc 120
tgcgcttcca gagccatgcc gtgcttgctc tgcangaggc agcagaggcc tacctggttg 180
gtctcttcca agataccaat ctgtgcgcga tccatgccaa gcgcgtgacc atcatgccca 240
aggacattca gctggcaaga aggatccgtg gcgagagggc gtaagtctgt cgacgggagg 300
aagaactctg cgctcgtttt gtgtgttcgc ctctctcacc ctgtaagttt tgtgagaaga 360
tgatctagta aactgtactt ggctgtttg actgtanccg cag 403

<210> 3721
<211> 257
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-D5

<400> 3721
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acgaagaatg catttggagt cgtcgccatg aatttagcga gtggaagaga ttggtagatt 180
cagagagatg ttcatataa cgcacaccat catggagtgt agtttgtcac ttgaggagat 240
gaaggagcgg tttccgg 257

<210> 3722
 <211> 407
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-D7

 <400> 3722

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ctgctggtgg tggcgggcggc ggcgcccgtg gccaccgcgt acggctgcta cgacgactgc  180
tacgagcgct gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg  240
tgcggtctca cggaccaggg cgccggtgcc gccggcgccg cgccggcttg atcgcccagc  300
gcattcatcg cttcagctcg atataatcgc tgctccgtca gcaaccaca tatgattcga  360
tcaatcttcc tcctccaatt tctcgaacce gtccaaattt ttttcct                407
  
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<210> 3723
 <211> 349
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-D8

 <400> 3723

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caccaccgcc cagcaataat ggcgagagc atgaggattg tggcgctggc cttggtggcc  120
ctgctggtgg tggcgggcggc ggcgcccgtg gccaccgcgt acggctgcta cgacgactgc  180
tacgagcgct gcgccaacgg caagaaagac cccgcctgca ccaagatgtg caaccaggcg  240
tgcggtctca cggaccaggg cgccggtgcc gccggcgccg cgccggcttg atcgcccagc  300
gcattcatcg cttcagctcg atataatcgc tgctccgtca gcaaccac                349
  
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<210> 3724
 <211> 414
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-D9

<400> 3724

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ccggctccag cggcgccccc cggcgcccca acatgaccga gccacgggcc ggctgggcct 120
gggccatcaa ccaggccagg tcgttccgct ggaacctgac ggccagcgcc gcgcgccccca 180
accgcgaggy ctctaccac tacggccaga tcaacatcac ccgcaccatc aaggtcatgg 240
tctcccgcg cccatcgac ggcaagctcc gctacggctt caacggcatc tcccacaggg 300
acaccgagac cccctcaag ctgcgcgagt acttcaacgt caccgacggg gtgttcagct 360
acaaccagat tggcgacgtg ccccccgcg ttaacgggcc actccatgtc atcc 414

<210> 3725

<211> 363

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E1

<400> 3725

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catggtgcgc gcagctatcg cgggggtcac gacggcgacg cgattccagg agctggtaga 120
ctggatggag gagcggaagg cggcattcag ggacgacggc aagtggacag agacggtgaa 180
tctggggctc aggagccccg cgctcatcat gttcgggctg cttcagttcg ccatcgacag 240
ggacctcggg ttcgggaaga ccagcctcgt gctgccttgg gtgcgccatg gccggctggg 300
gtccgcgtcc gtgacggtgg tgccctgcc caacggcgac gggctcgtgg tcttcggcg 360
cac 363

<210> 3726

<211> 417

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E10

<400> 3726

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ccggcaaacc acatcaagtc gcgatggaga tgaagaaggt cgcctgcgcc gtccctcgccg 180
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 cctcctcggc cgcgttcccc gccgtcggcg ccgtgctggg cgcctccgtg ctctccttct 300
 tcgcctacta cctgcagtaa aattaaagga gggtcggagg gagatgctgc tggctgocat 360
 tgccctgtatt cggttggatt ccgtttatat atatatttaa gtactttaat ttgggtc 417

<210> 3727
 <211> 405
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-059-Q1-E1-E11
 <400> 3727

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 atgccctcta cattctccac aagcacctgg gcgacttctt ggcaaccggg tgcatcacac 120
 ccaagcaggg agcgtcggca aacgagcagc tgggcaagct ttacgcacag gtgcgtccaa 180
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 acgagacggt ggtgcccagag ggggtaccac agtacctccg ccccttgctc aagcagcagc 360
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<210> 3728
 <211> 426
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-059-Q1-E1-E12
 <400> 3728

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 gttcaacaac accatgaggg agtgcattct gatccacatc ggccaggctg gtatccaggt 180
 cggaaacgcg tgctgggagc tgtactgcct cgagcatggc attcaggctg atggccagat 240
 gcccggtgac aagaccattg ggggaggtga tgatgcttcc aacaccttct tcagtgcagc 300

tggcgctggg aagcacgtcc cccgtgctgt ttttggtgac cttgagccca ctgtcatcga 360
 tgaggtgagg actggcacct accgccagct cttccatcct gagcagctca tcagtggcaa 420
 ggagga 426

<210> 3729
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-059-Q1-E1-E2

 <400> 3729

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 tcacgacctg ctgctgctga tgttgaggag tgaccagaac cagaaccgcc gtcctcgatt 180
 ctgatagatt atcttctagt ataccttgtg ttgttgctgt tgttgctgtc gtcgcgcgcg 240
 tgtatgcgat gaagctgcc a ttgctgctgt ttttaattaag cattctagat gttataccgc 300
 atgctttgtt tcggtttcta tgtcgataaa tgggtggcgg atgctggttt tcgtgctccg 360
 agccggccac caggaagaag acctgcctgc ccttgttggt tcaacgttgt aagaatgacc 420
 tacggtgtat 430

<210> 3730
 <211> 368
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-059-Q1-E1-E3

 <400> 3730

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 actggcggcg gcgtcgacag cgacggcgca tttcacggtc ggcgatgtgg atgagtacgt 240
 gtccaagcgc acgcaggagt cccgccacag gaacaacggt ggcgcgggca tcgatgacct 300

catctccagt gcggcgcgct tccacgccaa cgtggatgca cgcgcctatg gccgtagatt 360
ccgactgc 368

<210> 3731
<211> 293
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E4

<400> 3731

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tgcaatccgt gacctagatg gtatgtgatc aatgtattgc tgtcaacatg ttataaacct 180
ctattgggat gttgtatcag atgtttatat gacattccat atgttgtcgg tgttatttgt 240
gaagaatatc tgagttggta ctaaattaca ttcagagctc tatttgggat aaa 293

<210> 3732
<211> 375
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E6

<400> 3732

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catcgagtac gccgt 375

<210> 3733
<211> 421
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-059-Q1-E1-E7

<400> 3733

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acgtcccaga gaaggagtcg tccgccaacg gcttcaccct ggtcgggctc agaaccatcg 360
acatcgccaa gtcccacgta nagggcatgt gcccgggcaa ggtctcgtgc gcagacatcc 420
t 421

<210> 3734
<211> 392
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E8

<400> 3734

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accaggacgg cggggaagca cgccaacaag tacaagggtg tggacgcggt gacgggtgcta 240
gagatgcagg tggacgcgtt caagaagcgc gtgaaggcgg cgcggaggct cgccaaggag 300
gaggtcaaga cggccgcgac gcccgaggcg cggagggcgc tgaacctctg caagacctac 360
tacctggacg ccgccgacaa cctcggcgcc tg 392

<210> 3735
<211> 409
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-E9

<400> 3735

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cggagacgct ggccaacatc gggcgctcgc aggggcagct gcagacgagc gagatcctgg 180
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tggccaagct cccggccgtg cagagccaac tgccggccaa cattacgccc gagatgatga 300
ccagtctcgc cgccgtgcag cagcctgcgg ctgctggcca gcctggggcg gccccggctc 360
tcccggccga catccctcag atccccaaga tgcccgcact ctcccggt 409

<210> 3736

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F1

<400> 3736

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acgcgcacatc cgtcaacctc accgctaacc aggagtactg ggcggagcgc ggcggaggcg 360
cgcacgcgta caaccgcgcg ggtaccaga ccgacct 397

<210> 3737

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F10

<400> 3737

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caagtccgc tacctcctcg cgctcctcct gctctcgtc ctctccgtcg ccgctccgt 180

gtttctccgtc gcttccgtct actccgccaa gcgcgacgcg ctcaccttcc cgcgcggtgct 240
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cctcttcgcc taccacgcgc tcgccgtgct cgtcttcgtc ggctctctcg tcgccgcgga 360
caacggctcc ggctcgcgg gctgtctgc cttctcgtc gccgtgcct acctgtc 418

<210> 3738

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F11

<400> 3738

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cgtcggcgtc gccatgcgc gccatgggtt gcggtggtc caaggaggcc gtggccaccg 180
gcaacaccag cgcggcagc aaggctctcc ggaggaagtc ctctccgtc tccaccggcg 240
caagccacac ctccaccag tcgccgtcgt cctccggcgt cgtcgtcaag gacgtcgtga 300
aggatgcggc ggcgccggc gacgtgatga cgcgcgccga cgcggagaag cctatctctg 360
tcgagcccaa ggagacgcc atcgtggtga tggacgcaa gaaagatgat ggcaataaca 420
aggtggccgt gga 433

<210> 3739

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F4

<400> 3739

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ccatcatcat cgaccagaag tactgcccc acaacatctg cgtcaagtcc ggcgctcca 120
aggtggccgt caacgacgtc gtcttcaaga acatccacgg cacctccaac acgccggagg 180
ccatcacgtc caactgcgc aacaacctgc catgccagg cgtgcagctc gtcaacgtcg 240
acatcaagta caatggatcc ggcaacaaga ccatggccgt ctgcaagaac gccatcggca 300

agtccatcgg cttggcaaag gagctcgct gcatctgaac caattgacta acatgcatat 360
 attatatata taatcactct tcggtacctc tccccttctc acgtaatctc aagtctccac 420
 cgaatatata 430

<210> 3740
 <211> 237
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-059-Q1-E1-F5
 <400> 3740

ttgcaaaacc ctatagtgag tcgtattact gagctatcac ttctccgtga ggcctgagcc 60
 cctcaccgct gtgatctaga gcgggccacg tcgcctcggg gatcactctc actaccgagg 120
 cccacccatt tagtactata tatatatctc taggatcgat catcactaca ttggcaagct 180
 cctccgtcct gaggagccta ctgtccctcc tcgtctacat cgtcgcgggc gtgcccg 237

<210> 3741
 <211> 366
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-059-Q1-E1-F6
 <400> 3741

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 gccgcagcta ggtgccccgg ccaacgcccc ctcccaacgg caagccggtg cccctccgcg 120
 gcgtgcagcc atggctgcc a gccgcagcc gccgcggttc gttaccctgc tcgaccggcc 180
 ctagcccttg cgcgcggtcg gctgcccagc gcggcggcgc gaccagctag cactatcgtc 240
 gtcatgctcg tgcctcgtc gctcgttcgg tgcgtcgtgc acgcaacatg tcgtcgtacc 300
 tcgcctcgtc tcgccgtcgt cgcgaggtac ttgatatatg ttgggaatga ggggagtagc 360
 agcacg 366

<210> 3742
 <211> 418
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F7

<400> 3742

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ggtaggatgg acgcggacca gcagggcggtg gttgcggcgg cgggtgaagcc ggcgctggcc 120
aaggggacgc cgtcggcgctc gttccggctc cgcaacggga gcctgaacgc ggtgcgcctc 180
cgccgcgtgt tcgacctgtt cgaccgcaac ggggacggcg agatcacctg ggacgagctg 240
gcgcaggcgc tggatgcgct gggcctggac gccgaccgcg ccgggctgtc cgccaccgtc 300
ggcgctctacg tgcccgaagg cgccgcgggc ctccgcttcg aggacttcga caagctccac 360
cgcgcgctcg gggacgcctt ctccggcgca ctgggaggcc aggacgacgc caccgccg 418

<210> 3743

<211> 385

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F8

<400> 3743

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gcaaaacacc ttcgccggcg agagcatggc gatggcgtag cgtgtcctgg aggtcacctt 120
ggtgtcggca aatgacctca agaaagtgtc gctcttctcc cggactcgca tctacgccgt 180
ggcttccatc tccggattcg acctccgat cccttcccac agcacccaag cagaccacag 240
caacggctgc aacctctgct ggaacgccgt ggtacacttc cccatcccggt ctgccgctga 300
caccgcgggc ctgcactcc acgtgaggct ccgcgccag cgtctatacc tgggcgatcg 360
cgacatcggc gaggtgtttg tgccc 385

<210> 3744

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-F9

<400> 3744

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gcggcgcgga ggctcgccaa ggaggaggtc aagacggccg cgacgcccga ggcgcgagg 120
gcgctgaacc tctgcaagac ctactacctg gacgcccgg acaacctcgg cgcttgcaag 180
cgcgccatcg gcttccgga cgccgtcacc atccgcgcca cgatgagcat ggtggcgag 240
gacacgcaga actgcgacga ggagttcagg aaggccgtct ccaagaaccc catggaggac 300
cacaacaggt cgctcatcga gatgtccgag atctgccga cgctctccaa catgatccct 360
tacgaacatg tccattgatt tgtttgtttc ttttcccga cccctacta cgttcggtaa 420
cgtcgtc 427

<210> 3745
<211> 305
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-059-Q1-E1-G1
<400> 3745

tgcaagactc tagagtgagt cgtattaacg cgcgttggac gtcggcggtg gcaaggctgc 60
cgacggcatc agtgagggcg cacgctaagt ggcgccggca agccttgccg cgaggacatg 120
tcagctgctc cgcatgtcga caccagctat cggatcatccg gtgagctgaa gtatctcagt 180
cctgagacat catctcttca tggttcgca cccaaagact gagtctccga tagctcgctt 240
aggcggcagt ttcgcaagca cgtgcgcatg aatctcaagg caggttccaa ggtggccggg 300
ctcac 305

<210> 3746
<211> 418
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-059-Q1-E1-G10
<400> 3746

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tcttctcgg acaaagccgg ggccgttcgg cgggaggcag gggacgcacg ggcaggcagc 120
catgaacggc atcaacccca acggcggtt cctgtcgtac gggaacatgg agagctacgc 180

gatgtgggtg gcgaccggcg tggcgtcggc cttcttcgcg tccctcgagc gctgctcctg 240
catccacctc cacaccgagg aggacgacgg cgacgaggag gaggaggacc tcgaggaggg 300
ccgcccgtcc ttctcccgcc cgatccctga gtactactac gaccgggtccg gctcctccgc 360
ctccgtcgcc aagatgtgac ctgaccggac cgcgctccc ctccgccc aa gaaatgcg 418

<210> 3747

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-059-Q1-E1-G11

<400> 3747

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gtgtccgtgg tgatcggcac ggacgctggg tggctactgt tctactcgct cgcaggcgat 120
ctattgcaca agcagagtat atatcctgca aagatactga aactcaactt tcgtgagagg 180
aaggagaacg cttgggaaga ttcaggctca gatgaacttt ctgtagtggt tcctgggtgtt 240
atcgcgcgct ttgatgggtg tgaccttcag gctttctgtg catgttcaag gataagaact 300
gaattcttgg ttgctcacag aacgttctta aaaaagcatt tcaagatgta aaatcacgcc 360
tgtggaaaga taagtttgaa gagcaagatg ctgaggatga ggaaactttt ggacgaatac 420
ccttt 425

<210> 3748

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C10

<400> 3748

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gtggccttgc tgagcgtggc cctagtgggc ctgctcctct gccacctcgc caccaccgcc 120
tccgccacc agaaagacat ccacgtcctc ggcagcgtcg acggctccag cgacggcagc 180
agccccgagt ccgaaggccg cgtcgtctac gcggacatga agctggctga tacggaatcc 240
gatgcgccgg cgccggcgcc ggcgccgggg ccgtcgtccg gttgaactga gaagcgtgcg 300

tccagccaag caaggtgggtc aaaaccgaga actaattaag ggctcgattg tgtgtccggc 360
tactactgtt cttgccataa ttatatatag atacgcaaa 399

<210> 3749
<211> 391
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C11

<400> 3749

ccacgcgtcc gccacgcgt ccgcggaacgc gtgggcgcgc gccacagcc acatggcgga 60
cgacgccgtc gccgccggag cggccgtttg ctgcgcaggg ccggcctcgc tgtcttctag 120
caggaagcag cagcagcagc ccgacgacgc cggctgcggc agcagcagca gcgacgacca 180
ctaccagcac gacgtgatca tgctgaggcg gacgaggagc gggcgggcat tcccgcgcgc 240
gatctccgtg atcggcaagg gcgggcgggc gtggctctgc ctgcgggcgc accgcgaggg 300
tggaagcctc gtgctgcggc agatgcgcct gccgtcgcag gagctgctgc agccctgcaa 360
ggaggacggc aggttcaagc tctcatgca c 391

<210> 3750
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C12

<400> 3750

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ctcctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaagg catcgatgcg 120
aaagcgtccg ggcttggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240
aagcagacaa tctcatacc caagggcgac ttccttgctg gacaactcaa cttcacaggc 300
ccttgcaagg gcgacgtgac catccaggtg gatggcaatc tgctggcgac caccggaccta 360
agccagtaca aggaccatgg taattggatc gagattctac g 401

<210> 3751

<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C6

<400> 3751

ctccccgggtc gacccaacgcg tccacccaca cgtccgcca cgcgtccggc agagatgctt 60
cccactgaat cactgatcgt tgatcagtg tccaatattt tggcaagtgc agctttgaat 120
aaattgaaca gattggcctc gtggccattt tctgtattt atctgtagtc aggtccaatt 180
cttttctgtt ggtgagcgca agttattcat agatgactcg gtcattggaa tatttgtaat 240
attatgtcat gtatcgtaa atttcagttg tttgtttca gctgccagaa ctgttagcaa 300
gagtattctg gagctggaag ctgaacgca actggttgta tctatatcct tgaatgccga 360
ataaaggacg ggcaataaac tgcagcgaaa tatgtgctgt cagacattgt tgaaaaacca 420
atgtatggga aattgagtgg atc 443

<210> 3752
<211> 400
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C7

<400> 3752

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ctgatcgttg atcagtggtc caatattttg gcaagtgcag ctttgaataa attgaagaga 120
ttggcctcgt ggccattttc ctgtatttag ctgtagtcag gtccaattct tttctgttgg 180
tgagcgcaag ttattcatag atgactcggc catgggaata tttgtaatat gatgtcatgt 240
atcgttaaat ttcagttgtt ttgtttcagc tgccagaact gttagcaaga gtattctgga 300
gctggaagct ctaacgcaac tggttgtatc tatatccttg aaggcctaataa aaaggacggg 360
caataaactg catcgaaata tgtgctgtca gacattgttg 400

<210> 3753
<211> 417
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C8

<400> 3753

ccacgcgtcc gggcggttcc tgagggctcc tacgctgta gcacgcccat ggggagcgac 60
tgctacggtg gtgctccgtg ggcagaagac gaggaggtgc gccgcctcag cgtgcggatg 120
caggcggttg aggcagaccg tgagtccatg aggcaagcca tcatgtccat gggagccgag 180
aaggcgcagg tgatgctgct caaggagatc gcgcagaagc tctgcaagga cacgacacca 240
ccagttccag cggcagcagt ggctcagcac agcttttaca aagggggcaa cacacagccg 300
gccatgacca tctactgtgcg accaccacgg caccggctt tgcttatgca aaggaaactg 360
gtgaagaaga agccatcact ccttgctgca gtggtcaagt gggttacatc aatcatg 417

<210> 3754

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-C9

<400> 3754

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gtcaaacatg ctcaggagga ggctctctcc tgctctacct gttcgctccc ggctccactc 120
tatctctttc gccatacgcg cgagacggag gataggaaac agctaccatc gagcgaagaa 180
caaacagggg gcttcacacg tgcatgctag atcaattccg atcgctggcc ggcgggaatt 240
gaactaacga cgacctactt gcaaccgggg cgggcttttg attaataatt ccggcatgac 300
caatgggcaa attccattac ggcttggtgc cccacggcac gttgtttctg gtggaccact 360
acggctcggc agcagca 377

<210> 3755

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D1

<400> 3755

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aatcatagta gtgccgcacc gccgttccta gggttccaga gaccagcaag acaaacctcg 120
 cgtggcacct gcgtgccgtc ctgcagtaac gcgccagtag aagcttgctc catcggctcg 180
 cgtcggtgac ttctccctct tcgccgcgtt cgtcgagcga ggtcacgagt cacctgatga 240
 gcaagttggc acctggaatc tcaagtcca ggtcaagaac aggtaccgca cgatgaggcg 300
 catggaggat gctgcgatga gttcgtgaga gatctaggcc gtcgtctccc agtcaacttt 360
 gggttgctgg accgttgctc ccttataatg taattattta tttattttgt atagaactcc 420
 tattatgtag taaagatgtg acattcg 447

<210> 3756

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D10

<400> 3756

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 tccgcccggc cgccggctcc tccgccgact ccggccgggg ccacggcgcg gttatgatcg 120
 gtgattcgag gacgcgcgtt gctgctctgc ggctgggagg atctagccgg agagagttat 180
 tatctgtcac aatggcctcc agagatcaca ctggcttgac ccgacaactt cttgattttc 240
 aacatgatac aatagatgag gtaggcgcag gacatgaccc attcattgat ttgaaagcga 300
 gattcatgga ctttaaacag agaaactatg tggaaaaatt ttcaaattac caaaccttg 360
 ctgagcagca aacaccaaag ttcattggtg ttgcttctgc tgactccagg gtctgcctta 420
 ccgctgttt 429

<210> 3757

<211> 427

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D11

<400> 3757

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gaggacgcgc gttgctgctc tgcagctggg aggatctagc cggagagagt tattatctgt 180
cacaatggcc tccagagatc aactggcctt gacccgacaa cttcttgatt ttcaacatga 240
tacaatagat gaggtaggcg caggacatga cccattcatt gatttgaaag cgagattcat 300
ggactttaaa cagagaaact atgtggaaaa attttcaaat taccaaacc ttgctgagca 360
gcagacacca aagttcatgg tggttgcttg tgctgactcc agggctctgcc ctaccgctgt 420
tttgggg 427

<210> 3758
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D3

<400> 3758
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ggtagccctcc tgaagcccaa catggtgact ccaggctccg actccaagaa ggtgaccct 120
gacgtgattg ctgagtacac cgccgtacc ctccagagga ccgtacctgc tgctgtgcct 180
gctgttgttt tcctctctgg tggacagagc gaggaggagg ccaccgcaa cctcaatgcc 240
atgaacaagc tcagcaccaa gaagccgtgg tcctgtctt tctccttcgg ccgtgccctc 300
caggcgagca cctcaaggc ctgtgctggc aacgtggaga acttgagaa ggctagagct 360
gccttctctg ccagggtgcaa ggccaactct gaggctaccc tcggcaccta caatggtgat 420
gctgccgccg acac 434

<210> 3759
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D5

<400> 3759
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agcggtgcc acgatgacga ctaataagcc cctcctctc ctgcacctgg cgtccgcgt 120
ccttggtgcg gcgccggccg ccgcgaacgc gcccgcggg gcgttcagca actgggtggc 180

gatgaaccat cagagctacg cgctgtacgc gcagaagtcc gtcggggacg ggggcaagga 240
 gccctggac aagaagctgt cggaggcgga gaagaataag gtcacgtacg tgggtggaccc 300
 cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc cgggtgagcaa 360
 caccaagcgc gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga agctgttcct 420
 gaacatcagc a 431

<210> 3760
 <211> 443
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D6

<400> 3760

aattcccgtt cgaccacgc gtccgaaaca acaagactga cagcgacgat gatgccacag 60
 ctgcgtagcc tcgtcgcgtt ggtcctcgtg gccacggcca tagccgcgcg tcccggcggtt 120
 gggtttgtcg tcaccggccg catctactgc gacaactgcc gcgcccgggtt cgagacaaac 180
 gtgtcccacg ccatccaagg cgcgacggtg gagatggagt gccgccactt caagtcgcag 240
 cagggtccacg acaaggcgga ggcgacgacg ggccccggcg gctgggtacag gatggagatc 300
 agcggcgacc actaggacga gatctgcgac gtgcgcctgc tcaagagccc cgaggcggac 360
 tgcgcgaga tcgaccactc ccgcgaccgc tgccgcgtcc cgtcacgcg caacgacggc 420
 atcaagcaca gcggcggtccg cta 443

<210> 3761
 <211> 350
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D8

<400> 3761

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 agaggattca tatgagcggg aaaataggcc aagtatgtag agtgatctgt cttgtataga 120
 aagcaggcaa aaaggtccaa tgtatatgtg gaacgtagca tcttcagttg tgctaggcct 180
 ccattctttt tttttcttgt ttggatgggc cttttgcttc ttctagctg ctgtatcatg 240

tatgctccca ttgagccatg agttgtaaaa tattaaattg aagggtgcttc ttccataata 300
aaataagcaa gataaaaaaa aagttatcag aaaaatttaa aaaagtaaaa 350

<210> 3762
<211> 337
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-D9

<400> 3762

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ggattcatat gagcgggaaa ataggctaag tatgtagagt gatctgtctt gtatagaaag 120
caggcagaca ggtccaatgt atatgtggaa ggtagcatct tcagttgtgc taggcctcca 180
ttcttttttt ttcatggttt ggatgggcct tttgcttctt cgtagctgct gtatcatgta 240
tgctcccatt gagccaggag ttgtaaaata ttaaattgaa agtgcttcat ccataaaaca 300
aacacagtca cgaaaaccct ttttttattg agcagtg 337

<210> 3763
<211> 439
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E1

<400> 3763

gtcgaccgac gcgtccggtg atcgacccca ccgggccacc gttccttgcc aactgccaag 60
catcaccgag aaatctaata actcgttgct ctctgtcttc gtcctcgat cgatccagga 120
gggggaagca gaaggaggga tggcggagaa cccgcagctg tttgggaatg ggatgccggt 180
gccgttctac agtgagatgt tcgtcctcgc ccgggatggc gtcgagttcc acgtcgacaa 240
gatcccatca gtccttggtg gtcattgtgaa aacaaaaggc acaatttacc tgtctaatat 300
aaggatggtg tttgttgcca acaagcatgt tggcaacttc tttgcttttg atatgccact 360
gttggttggtg cacggtcaga agttcaatca gccaatattt cactgcaaca acatctctgg 420
attcgttgag ccagttggtt 439

<210> 3764

<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E10

<400> 3764

gggtcgaccc acgcgtccgg gaagtcgcag ggcgacgtca tgatgaacgg cgccttcttc 60
aacgagtcgg gcggccagaa cgagcgcaag tacgacaggt tcgacttcat cccggccaag 120
cacggccgct acgtcgggtca gctcacgcgc ttcgccggac cactcaagtg catcgtcggc 180
cagccgtgct agtagacagc ggcccgggtcg ggcacatact cctcttccta tatacatcgg 240
atttggatgg gcggcatata tgtacgtgtg tgtaatatat tattactaca tcttgtacta 300
tatgcgacga ttgcttgact gatgaatcac gctttttagg ttagaccaat ttagaaggga 360
attagagtgg attaaattcg ctcccggtaa aaaatgactc gaagaaaatt tagggactgt 420
ttggtttgtg gttaaattgtg ctacac 446

<210> 3765
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E11

<400> 3765

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gctactctcc tcgagcgagg cgcgagcac ggggacatca aatggcggca gcggcgga 120
tcggtggttt cgcggcgagg agagtggcgg tggcgacgct caggccggct gcgcaccag 180
ccccggcggc ggcggtggca ccgcagccta ggagggcggg ggccggcgag tcgctgcaga 240
cgaccgccac cgaggcgctg acggcggtac tcgccggcac gaccaacggc gctgtgcatg 300
ctcggatgaa tagtaaggct acaagtgaat tcacttcaca ggcagttact gcaaattcta 360
ggagaaagac aaagatagtc tgcaccatag gtcctcaac caacactcgt gagatg 416

<210> 3766
<211> 390
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E12

<400> 3766

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cttcaatcca ccgtcagtag atgcgggtcca gttcatttca gtggttcaat gaggcggaca 120
tggtcatcag cgtgcaacgg tctctaatac aggacaata ctcgtggatt accttaactt 180
tggtatccgt cccgcgagtg aactcagagt ggacaaacaa tgtaacaaac tagtcatcga 240
tggtccctt taatttcac catggcattc ctggtttgta accaaatgtt ccaatttcac 300
ctccgacgcc aatgttaagc tggaatgcaa ggaatttggc caccgcaagc tcaaacgctt 360
caacgaacgg gttaccgaac ggaaaggagc 390

<210> 3767

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E5

<400> 3767

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caccctgctg tccgcaaata acatcaacaa agtgctgctc ttctcccgga ctgcacata 180
cgccgtggct tccatgcgcg gattcgacct ccgcattctc tcgcacagca cccaagcaga 240
ccacagcagc ggctgcaacc cctgctggaa cgccgtggta cacatcccca tctcggtgc 300
cgctgacatc cgcggcctcg cactccacgt gaggtccgc gccacgctc tatacatggg 360
cgatcgcgac atcggcgagg tgtttgtgcc catcgacgac ctctggccg gcgcgacaa 420

<210> 3768

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-E6

<400> 3768

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ggatccctcg ctaataacat catggtcgtg ggtgtcgtcc ttgcagcgt cgtcgccggc 120
 gggtcatgcg gggcccgaa ggtgccgcc ggtcccaaca tcaccaccaa ctacaacggc 180
 aagtgggtca ccgccagggc cacctggtac ggtcagccca acggtgccgg cgctcctgac 240
 aacggcgggtg cgtgcgggat caagaacgtg aacctgccac cctacagcgg catgacggcg 300
 tgccgcaacg tccccatctt caaggacggc aagggtcgtg gtcctatgcta cgaggtgaga 360
 tgcaaggaaa aacctgagtg ctccgggcaat ccagtcacgg tgtacatcac tgacattaac 420
 tacgagccta tcgtcccta ccacttcgac 450

<210> 3769
 <211> 414
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-044-Q1-E1-E7
 <400> 3769

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 agcgccacca cgtgcatcat ggatcctttt tccagcgcac cagctttgat cagggtattca 180
 catgtagggt tttatgatac ggtcagatct accgtcaccg cgagactata tacgctagtg 240
 catatgggat tgggattgta ctacatggaa caagttctgt ggaatcgctt gtcgttacgt 300
 ctagatcata cgaggcagtg ccggctgcgg ctcatgctca gatgtgagat tcttggcatg 360
 actacaatgc tcgggatttc aatctctgtg tatatcactg acattagcta cgag 414

<210> 3770
 <211> 438
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-044-Q1-E1-E8
 <400> 3770

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 ggcgcgcct gtcctctaca cgggagttcg ctgcggccgt cagcactct ggggcgctgt 120
 tcgtcgccgg tggctacgtc cctggtccc ctttctacgc cagggtcttc gatctctcca 180

ctctgaatgc caagcggaga gccgtcgcta gtctgcaca cctccgcgcg atgtggatgc 240
acggctgcgc ggcgtcgat gggagggctct ctatggctgc gcgatggagg atactccacc 300
ggggctcaag taattgctcg cgggacttca catccgccgc tgtgcctctc tacgtcgagg 360
agcgactcca acgctcgctc tatgccgagc gaggacacgt gtcacttgaa aatcatgttg 420
gtacctggat tctcaagt 438

<210> 3771
<211> 446
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F1

<400> 3771

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tgctggctgc catgctagcg gtggccgcgc atgtcgccaa cgccggccac gccaaagccc 120
tgacgcctgg cgggcgcgtg gtacacgaca accacggcaa gttcacggcc gggccgtgga 180
aaccagccca cgcgaccttc tacggcgggc gggacgggtc cggcaccacg gcgggcgcgt 240
gcgggtacaa ggacacgcgc gcgcaggggt acggcgtgca gacggtggcc gtgagcacgg 300
tgtttgtttg cgacggcgcg gcctgcgggc ggtgctacga ggtgcggtgc gtggacagcc 360
ccagcgggtg caagcccgcg gcggcggcgc tgggtggtgac ggcgaccgac ctgtgcccac 420
ccaaggacaa gtggtgcaag ccgcgc 446

<210> 3772
<211> 439
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F10

<400> 3772

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tgctgccctt cgttcacctc tcttctctct cctccctgcc tgccagggag aggggaagtc 120
agaggcacgg agtggcgcag agcagacgca cgtgaacat ttagctgtc cctgtcgtcg 180
tcgtcgtcgt caacgaatcc acacaaggaa aggatggaga agaagccgac catcctcatg 240

aacaggtacg agctcgggcg cacgctcggg cagggcacct tcgccaaggt gtaccacggc 300
 cggaacctcg cgtccggcga gagcgtggcc atcaaggtca tcgacaagga gaaggtgatg 360
 cgcgtcggca tgatcgacca gattaagcgc gagatctccg tcatgcgcct cgtccgccac 420
 cccaatgtcg tgcagctgc 439

<210> 3773
 <211> 438
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-044-Q1-E1-F11
 <400> 3773

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 cctccttcac cactgttaag ttgcgcgcgc ccaccagcgc ccgtgaggtc acctccaccg 180
 ctaacgaaat tatcacctcc tccaccaccg ataaggtcgc cccccccacc acaagcatac 240
 tcacctctc catcagctcc aataagctca cctcctctc cgatgcaatc cctccaccg 300
 cctgctccag tcagctcacc accaccacct ataaaatcac caccaccggc tccagtaagc 360
 tcaccacctc ctctggcgca atccccctca ccacctgctc cagtcagctc actaccacca 420
 cctggtaaat cacctcct 438

<210> 3774
 <211> 133
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-044-Q1-E1-F5
 <400> 3774

cacgcctcta aaatgagtcg tattataaaa aaaaaaaaaa aaaaaaaaaa aaaaaagaaa 60
 gaaacacata aaaagaaaaa aaaaaaatta cacatacata caaaaatcgt caatcgggtg 120
 gccgccaac agg 133

<210> 3775
 <211> 431
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F7

<400> 3775

ggccaagaat tcccgggttcg acccacgcgt ccaccagaat atgccatgac tggacagctt 60
agcacgaaga gtgatgtcta cagcttttga gttgtgctgc tggagctttt aaccggtcgc 120
aagccagttg accacacact gcgcctggtc cagcagagcc ttgtgacatg ggctacaccg 180
aggcttagtg aagacaaggt gaggcaatgc gtcgatccaa ggctcggaga cgaataccct 240
ccaaaggctg tagccaagat ggctgctgtg gccgccctct gcgtgcaata cgagggtgaa 300
ttccgtccca acatgagcat cgtcgtcaag gctctgaacc ctttgcgtga cagccggtct 360
ggcaaccgcc ctactgcctc gtcggcctcc cagcgtgccg agcgatccgg actgtgaatt 420
ctcatcgctg c 431

<210> 3776

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F8

<400> 3776

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cctccagtca ggaggagtgc aaggatcaag aagagaacac gggggacatt ctggaggaga 120
agcgtgacgg gaaggacagc gaagacctga gcagcacagg cgacaaggct tgtgtcgggc 180
tcgggagcag tgatataaac atcccgatgg aagaagcggg tgatgaacct gttaaaccgg 240
cggaagctgt ggacgaagct gggctgaaga gagatgtctg ctgttcacca gctgagccaa 300
acgaagccgt tggtcagaac gagctcaatg aggctgctgt cgtcggtgaa acgacgactg 360
aaccgaagga ggctgaggat gaagccaaga taataaagca agtcgactgc gaaactgcat 420
caaaagaagt tgctagtact ggggccgag 449

<210> 3777

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-F9

<400> 3777

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tacgtcctcc accgcgtcgc cgccggccgg cctctgcca gcccgggctg cctgcgaggg 120
cttctgatgg ccctcgacgc cgtcctttcc tctagtgcc cagctttatt gcagatccag 180
ccctctgac ctcgtcttct ttcacctctc caacatgaag gtcaacacca agatcaagct 240
ggagccggtc atggcgccgt cgtcgtccct gcccgggagc gccagcgagc taccgaccc 300
gccgtcaccg ttcagctcca acacggcgca ccacccgtc tccgtgcca ccacacctag 360
gttgctccta tcgtgctcgt cgttcggcca catggtgacc ccgcccaccg acacaccgcc 420
g 421

<210> 3778

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G1

<400> 3778

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tacagctggc catgagcgcc cgcccaacca tggcgggcgc gccgcccgtg cgcgcctgcg 120
tggtggcgct ggcgctggcg ctggcggtgc cgtgctcca gcccgggccg tccgacgccg 180
cggcgccagc cgccccgcag tcgcccgcga cggcggtgtc gtcggggccc gccaaagcca 240
agtgcgtggc cggcgccagg aacgaccacg cgtgctgcgt cggcgccgtg caccgcccgg 300
acagccagga cgaggagggc tccagcgtca ccatctacgc gcccgccgcc gcgcccgcg 360
acgtcagcca cgacgacggc agcgactaca acgatcccga cgtgcccac c aacgaccagc 420
tcgtcgtcgt cgggcac 437

<210> 3779

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G11

<400> 3779

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cgcgccagcga ttgccggcga tggcgagcct caccctgccg ccggcgatgg cgaaccacg 120

gcaggacgcc atcgacctcc aaaaggcctt caaagggttt ggctgtgaca gtacaacagt 180

gataaacata cttactcatc gcgattcagt gcagcgtgga ctcatccaac aggaatacag 240

ggctatgtat catgaggaac tctcccatcg catttcatct gaactcaatg gaaaccacaa 300

gaaagctatg ttgctgtgga ttcttgatcc tgctggacgt gatgcaactg ttttgagaga 360

agctctaagt ggtgacacta tggatctgag agcacccaac tgatatatat 410

<210> 3780

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-044-Q1-E1-G4

<400> 3780

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cttgacgggc agggcccagc cgtgtggagc acgaactcct gcaccaagac gtacgactgc 120

aacatccttc ccaccgcctt ggtcaccatg gtcataatcc ccagcaaggc tgccgctgac 180

acccgccgac tctcactcca cgtgaggctc cgcgcccagc ctctatgact caccattgac 240

gacaaccacc aggtgttcat ccgcaactgc tacatcaagg accacgacgt gctagcccgc 300

catatcgacg ccggcaacgg cgtggggcgc cccgcgggcg tgctcatcaa cggcaanggc 360

ggcaaggacc tggaggccgc gctgccttc accttcgang ccggcaagac gtaccgcctc 420

cgcgctctgc 429

<210> 3781

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G5

<400> 3781

ccacgcgtcc ggctaggata agcaciaaac cgtgcacgcg ctgacgccga cgtcaagggtg 60

tacggtaact cggagcgtca tccgagagag agaccgcga ccgccacgt tgaccgtaat 120
 ccgtggagag tgagtccccg gccgggctac cagctaagac acgacgggtcc atccagccat 180
 cgggtggccca gcagattcca caatggcggc aacggcggac atggagcgga tcttcaagcg 240
 gttcgacacc aacggggacg gcaagatctc gctgtcggag ctgacggagg ctctgaggac 300
 tctggggtcc acctccgccg acgaggtgca gcgcatgatg gccgagatcg acaccgacgg 360
 cgacggctgc atcgacttca acgagttcat caccttcagt aacgccaacc cgggggtcat 420
 gaaggacgtc gcaa 434

<210> 3782
 <211> 434
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G6

<400> 3782

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 catatatata ttcttgccaa gataaaggta atggagtcgt cacgcagggt ccagccggcc 120
 gtcacacctg ttctctgtct cattgtgtcc accgatatgg cacaggcaag ggaatgagac 180
 aagtacagtg agcgatttgt tggggcatgc atgatcgag acaactggcg caatgtgtgc 240
 cgcggtgagg gcttcttggc cggcatgtgc agcaccttc gccgccgtg catctgcact 300
 aggcagtgtc aaacaagatc gctcgatcgt tcgccatgca tcgacaacct attcttaata 360
 acgttcatta tctcgttctt atttatgacg aatgtcatgt atgttctggt gactgtcatg 420
 tatattctga tgac 434

<210> 3783
 <211> 438
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-044-Q1-E1-G7

<400> 3783

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agagccttgt tcctcctggt cctcttctgc atcgtgcatg gtgagaagga agagtcaaag 120
ggcatcgatg cgaaagcgte cgggcctggt gggtccttcg acatcaccaa gttgggcgcc 180
tccggcaatg gcaagacaga cagcacgaag gctgtgcang aggcattggc atcggcgtgc 240
ggcggcactg ggaagcagac aatcctcata cccaagggcg acttccttgt cggacaactc 300
aacttcacag gcccttgcaa gggcgacgtg accatccagg tggatggcaa tctgctggcg 360
accacggacc taagccagta caaggaccat ggtaattgga tcgagattct acgcgtggat 420
aacctgggtca tcaccggc 438

<210> 3784
<211> 390
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-G8

<400> 3784

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cgcatcaacg ccgtggcttc aatctccgga ttcgacctcc gcatcccttc ccacagcacc 120
caagcagacc acagcaacgg ctgcaacccc tgetggaacg ccgtgggtga acaacgggga 180
gggtgtccggg gtcacgtgc tcaactccaa gttcttccac atgaacatgt accggtgcaa 240
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catccacatg ggcgactcat cggggatcac catcaccaat accgtcattg gcgctctgca 360
cgactgcatc tccatcggac ctgggacctc 390

<210> 3785
<211> 443
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-044-Q1-E1-H1

<400> 3785

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agcttccggt tcacgtggt caggatcgac gacaaggaca tggagatcaa ggtggaccgc 180

ctcggcgagc cgaaccaggg ctacggcgac ttcaccgaca gcttccccgc cgacgagtgc 240
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ttcttcttct cctgggtccc tgatactgca cgcacccgga gcaagatgct gtacgccagc 360
tccaaggaca agttcaagan ggagctggac ggcattccagt gcgagattca ggccanccga 420
cccagcgaga tgagcctcga cat 443

<210> 3786
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H2

<400> 3786
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atcaacgccc tggttcaat ctccggattc gacctccgca tcccttccca cagcacccaa 120
gcagaccaca gcaacggctg caaccctgc tggaacgccc tggtagactt ccccatcccg 180
gctgccgctg acaccgccc cctcgcactc cacgtgagge tccgcgccc gctctatac 240
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gacaaggggtg gcgatccgag gcccgtagc taccaagtgc gcaggccgca ctctggccgc 360
gcccacggcg tctctactt ctgctataag ttcaccgatg ttcgcgcgt ctcttggtgc 420
t 421

<210> 3787
<211> 428
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H5

<400> 3787
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ggcgagcgcc cttgagtgt cgcctaact aacggaaata gcaaaggcgc gcaagctgat 180
cgatgtccat ggccacgggc tgtgcccgtg gcggttcgac cacacgcgcg ggatcagcgc 240

ggtggccagc agctgcaagg accgcccgt ggcgtcgccg gagcgctgct gcggggcgct 300
 caaggcctac gcggtgcccct acagcgagct catcaacgac aacgccaca acggctgcgc 360
 cagcgagatg ttctacgtca tcatgacacg cggcaggctg cggccggggc tcttctcgca 420
 gctgtgcg 428

<210> 3788
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H7

<400> 3788

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 catcgtcggc ctcgctggcg agaggaagca gatctacacc gacaagggca tgggcagcgt 180
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 cgtcaacggc caatgcatcg gccgctactg gatctcctac aagcacgcc tggccgggcc 360
 atcgcagcag ctttaccacg tgccccggtc cttcctgcgg cagaaggaca acatgctggt 420
 gctggtt 426

<210> 3789
 <211> 403
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-044-Q1-E1-H9

<400> 3789

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 tgagactcct atgggttggg agatccttct ctacatgtat gtcctctatt caccggactg 180
 gcactacagg agcacaatgc caactttcct gttcctgtat ggtgctgctt ttgccgtagt 240
 acatttcttt gcccggttcc aagtcgtatt caagctgcat tacgttggcc tctgcttgct 300

ctgcatcccc cggatgtaca agtactacat acagacgaaa gacgtgggtg cgaagcggct 360
cgcaaaactg tgggtcctta cactgaccct tgggaacctc tgc 403

<210> 3790
<211> 412
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B1

<400> 3790

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gaccccgcg cggctggcgg agctgttcgt gaacatcgcg gccgagaagg gatccgggat 120
ggccacgttc gtgcacggga agtacaacaa cgccaaggac agcaccggtg tcaagtgtta 180
cgacagctgc tcggacgacg tcgaggaggc cgtcgccac ctcaacggcc tcgtccggga 240
gcccaccgac gccaaagtcc tggagctcaa gtcgtggctc tctccacgc tcggcgggac 300
ctccacctgc gaggacgcct gcaaggacct gcccaagaac ggcgacaagg acgacgtcgt 360
caacttcagc ctcgacttcg agaagctgca gcgcgtcacg ctggacctca tc 412

<210> 3791
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-045-Q1-E1-B3

<400> 3791

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gccacattta cacactgttt atccacaccg gtccactgat actcatcctt ttgccaccat 120
gggctctggt tctcttgctg caatgtcagt gtttgaatct aagtacacag aaggccttac 180
tacggaagat ggaatacaga ttgtgtgcc aagcaatctgt gctgggtattt tcaatgactt 240
gggtattggg agcaacgtgg tcgtctgcgt gataaccaat gggaagacag aatacttgat 300
aaaccacat ttgcctaata ccaagactta tgctagtcca aatggatata ttttcacaaa 360
tgggcagact gaagtactgt cttcaaaggc cacacttcta aagc 404

<210> 3792
 <211> 215
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-C3

 <400> 3792

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 tcatccagca gcaatgtcca gcatcgggca gtccttctac gctggcgacg ccgaggcgga 120
 gggcgagtac cacgtggagc acgcgggtgga gtgcgtcaac gacaccgccg gagccgcgga 180
 cgacatctcg caggtgtagc agcaccgcgc cacca 215

<210> 3793
 <211> 431
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-045-Q1-E1-C5

 <400> 3793

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 gcgagggcgc ggcgagccgg cgggcgcaat cggatttggg gaggcaaaag gaaaattccg 120
 gagagcagtt ctttccgcc tccccatttc ctccggatag atttgggttt ggctgcgtc 180
 gattagtcg gcgctcgaa cgcaccaat ccattcgccg agggatcgag caagcgaggc 240
 gtggatcgca ggcggtattc cctgcctgcc ttttcttctc ctccgcctgt ttttgcgcg 300
 gtctccccct ccggccgacg tggactcgac agatcattaa tttttgttg gcatacatc 360
 ccaaccttga tgtaaagacc tccttcattc ataacctgt gttttggaag ggtatttcac 420
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<210> 3794
 <211> 455
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-045-Q1-E1-C6

 <400> 3794

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 ctgggtgctgc agctgctgga cttcctgcg gacgcccgtgc tgcctctgct ctcctcgctg 180
 ggctctcgcg cgccgcgggc cgccgacgac catccggcct acgcctacgc ggccgcggcg 240
 ccgcgcgggt cggacctctg ggcactgcag ccgtcgtccc tgcagcagca gcagcagcag 300
 gcggcgggcg cgcccttggc gggcgggccc acgcgggcag ccatcaaggc gcgcctgccc 360
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<210> 3795
 <211> 324
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-045-Q1-E1-C7
 <400> 3795

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 aaggtgagca tcatactgtt cttttggaca tgcattgtgt gaaagcatat atatattttt 180
 tgttcatttc gaagctggct ggccttggtt tacagtctga aggagttcta cttcggggaa 240
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 tgtgtgcaca ttggtgagag agga 324

<210> 3796
 <211> 364
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-F5
 <400> 3796

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 tcggatcccc gccagtgcac gccctggaac ggacggacgg aatggcagcg tcgccggacc 180

acctcttcgg cctgcgcaac agcttctacg tcggcgcata ccacgcgctc atcaccagca 240
gccagtcctt ccccgcgcaac gcgctctccc ccgacgacct cgtcgagcgc gacgccttca 300
tgtaccgctc ctacatcgcc atcggtcctt accagctggt gatcggcgag atcgggccca 360
gcgc 364

<210> 3797
<211> 148
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-051-Q1-E1-F6
<400> 3797

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ctaagtcttt cgatcgtgtt gcgcggcttc ttcgtcgcat gggccatctg taggtgtagt 120
ctgaggcctg acaggagcat ttgagtgg 148

<210> 3798
<211> 159
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-051-Q1-E1-F7
<400> 3798

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caaattgtgc cttaaccacg tcgatgtgct gccaaattgt caatccctga tacggtcaat 120
catggatgga ccgactgcaa tataaatata ttataccac 159

<210> 3799
<211> 419
<212> DNA
<213> Zea mays
<223> unsure at all n locations
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<400> 3799

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tcctttctagc gctctttctgc accgtgcatg gtgagaaggc aaagtcaaag gacaacgatt 120
caaaagcgtc cgggccccggt gggtccttcg acatcaccaa gttggggcgcc tctggcaatg 180
gcaagacgga tagcacgaag gctgtgcang aggcgtgggc atcggcgctgc ggcggcaccg 240
ggaagcagac gatcctcatc cccaagggcg acttcctcgt cggaccactc aacttcacag 300
gcccattgcaa gggcgacgtg accatccagg tgaatggcaa tctgctggcg accacggacc 360
taagccagta caaggatcat ggtaattgga tcgagattct acgcgtggac aaccttgtc 419

<210> 3800

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G10

<400> 3800

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agaacgactc ggcattggga gatttcgctg agcactcgcc attcgggagc agcaattcgc 180
tgccagagtt gggaccagat ggcacacaag atctagcctt ctaccaaaga agcagccctg 240
aacagcaatg gagctggtcc gggctctgtt caacagagga ttccgatgac ttcgagggtg 300
caacgaattg ctcgtcagat ctggattgcg tgagaccatc tagtgcccca aaagcttctg 360
gtttaacaaa cggagggggc tcagctgcaa gaaagtccca actgaagggt gcaaaaagtt 420
cagaca 426

<210> 3801

<211> 434

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-G11

<400> 3801

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ttgtgttcct cgccgtggcc tcaccggctg ctctggccgc cttcgatgtg atagagatgc 120
tggccgacaa gccacgtac tccacgttcc tgaagtcct gcaggacacc aaggtcgcgg 180

gcgaggcgaa tcagctccgg tcggcgacgc tactggtcgt ccccgacaaa cttgccaaagc 240
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gttacttcga ccccatcaag ctggacgaga tgaagacacg caccgccatc ctccccacgc 360
tgctctccgt cancgacaag anactcggcg tcctcaacta caccagggcc gacgacgggc 420
aatgtactt cggc 434

<210> 3802

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G12

<400> 3802

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gtcacggttg acctatggca tgataggtgg aaggtttgtg aagggagaga acccatttgt 180
cgaggagtcg tatcaaaggg ttgctctcga ccagctcatt aagattgcgg gcatcacgga 240
tgacgacctg ctgatcatgt ctgatgttga tgagatccca agtggacaca ccatcgacct 300
cttgagatgg tgcgatgacg ttccggagat actccatctc cagctcagga actacctcta 360
ctcgttccaa ttctacttg acgacaagag ctggaaggct tcagtgcaca gatacagagc 420
tggaagacg aggtatgcaa cattccggca gacgga 456

<210> 3803

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G2

<400> 3803

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tttgagcttg gcattcctcc tgaaaacatc actgcaaacc aattgttatt tggcacattg 120
ggggagtacg ccggaattga tcccacagag ccacttcac gcagtggggg taaagcaaaa 180
gcagtgcagc aaataaaaaca ggaccatggc tacaagacag ttgttatgat tgggtgatggc 240

gcaactgatac tggaggctcg gcaacctggc ggagcagact tgttcactctg ttacgccggg 300
 gttcagatga gagagccagt cgcagcaciaa gctgactggg tgggttttga ttttcaagag 360
 ctgatcacta agttgccatg aattcattac ctaccgcaat ttatgaacct ttgcattgt 419

<210> 3804
 <211> 446
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-G4
 <400> 3804

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 aagggtccagc tcgtcctgat ggccgtcttc ttctacgcg cgctgtacct cgtcctcgca 180
 tgccgccagcg cctggggcgca cctcctcgcg gggggtctca ttgggttcgt ctggatccag 240
 tccggctgga tggggcacga ctggggccac caccgcatca ccggccatcc ggtcctcgac 300
 cgcgtcgtgc aggtgctctc cgggaactgc ctaccggcc tcagcatcgc ctggtggaag 360
 tgtaaccaca acacgcacca catcgctcgc aacagcctgg accatgaccc ggacctccag 420
 cacatgccgc tctttgccgt ctcccc 446

<210> 3805
 <211> 339
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-051-Q1-E1-G5
 <400> 3805

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 caagcgacat ggccagcaaa agcttgattt tcaccatttg tagctctgta aattattcag 180
 atggagtgta tccaaatgtg catgtggtcc aactgcattt tcatgttctt tttatgtggc 240
 gtcctttttg gcaaaacacg aaatgcccgc cgcgtaacgc caacgattgt aaaattgcc 300
 atcctaatac cggagtactc caagtgtgtt ggagaacct 339

<210> 3806
 <211> 345
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G6

<400> 3806

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atcatgggagc tggctgtcgt ccttgcagcg ctcgtgcgcg gggggtcatg cgggcccccg 120
aaggtgccgc ccggtcccaa catcaccacc aactacaacg gcaagtggct caccgccagg 180
gccacctggt aaggtcagcc caacggtgcc ggggctcctg acatcggtgg tgcgtgcggg 240
atcaagagcg tgaacctgcc accctagagc gccatgacgg cgtgcgggaa cgtctccatc 300
ttcaaggacc gcaagggctg cggcgcatgc gacgacgtga tatgc 345
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<210> 3807
 <211> 404
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-051-Q1-E1-G7

<400> 3807

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gtcccgccct tttccgacat tcacaggggg gacaggaaat cagcggccat ggcctcgatt 120
ccggcgacga ctttcgccgt catcttatcc gtctcttct gtgccgcggc tggcaccgcc 180
gtcgacaacg acctccccga ctacgtcatc cagggccgcg tctattgga cacctgccgc 240
gccgggttcg tgaccaatgt caccgagtag atcgcgggcg ccaaggtgag gctggagtgc 300
aagcacttcg gcaccggcaa gctcgagcgc tccatcgacg gggttgacga cgggaacggc 360
acgtacacga tcgagctcan ggacagccac gaggaggaca tctg 404
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<210> 3808
 <211> 389
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-G8

<400> 3808

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atggttctcc cttccaaaaa gcaaaacaaa agaaactcgt atagtcgatc gacgaccatg 120
catcacattt ctttttcttc gatcttctct tatttccgca gaaaaacaac gaaggaaacc 180
caaccaagga aacgcattgt attgcttaag catcgccgga ggagctggtc gatcgctcgc 240
tcactcacgg gcctgattgt tccggtcacc tgcgtcgtc gtcgagctga gacacgtccc 300
tccagaagcc cgtgccgtag aacctggccc acacctcctt ctcaagctcc cccgtctcct 360
ccagctgcaa ggcgggcttc accggcagc 389

<210> 3809

<211> 467

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-G9

<400> 3809

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gccttcacgc ctccctcacc aaataaggct ccgccctttt ccgacattca cagggggggac 120
aggaaatcag cggccatggc ctcgattccg gcgacgacct tcgccgtcat cttatccgtc 180
ctcttctgtg ccgcggctgg caccgccgtc gacaacgacc tccccgacta cgtcatccag 240
ggccgcgtct attgcgacac ctgccgcgcc gggttcgtga ccaatgtcac cgagtacatc 300
gcgggcgcca aggtgaggct ggagtgaag cacttcggca ccggcaagct cgagcgctcc 360
atcgacgggg tgaccgacgg gaacggcacg tacacgatcg agctcangga cagccacgag 420
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<210> 3810

<211> 402

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-051-Q1-E1-H10

<400> 3810

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gcggcgccaa aaagaagccc cacgtcaacc acggcaagtt taaggcggag ccgtggacgg 180

acgggcacgc gacgtactac ggcgggcgcg acgggttaac tgacaccacg gacagcggcg 240

cgtgcggcta caagggcgag ctggggaaaag actacggcac cctgacggcg gccgtgggcc 300

cgtcgctgta caccaacggc accgggtgcg gcgcgtgcta cgagctcaag ggccccaagg 360

gcaccgtggt ggtgacggcc accaacgagg ccccgccgcc gg 402

<210> 3811

<211> 231

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H11

<400> 3811

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ggatgactgg gaacatcact gcaccagtta gcacatcgtc atgtgagctg ggcaccaatc 120

catatgatgg gggttgtgtc ctaccaggac agtatgagta ttaccactgt attggagtag 180

ttcgcagttg gggatacact catgtccaca cacagcacag catcatgtgc c 231

<210> 3812

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H12

<400> 3812

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acatgttgaa gtagtaatag ttactgcagt actgcatctg atttgacttg ttgtatggta 120

aattgcccgt ccacgcaggt tctatacttt gaagattttg taccttgtca gatatcacag 180

tcctcttttg atgtgttgat gagcacagac cggcaaagct atggtttcaa gttaaaaaga 240

ggtttgctgg atgatgaagg aaatgctttt cttgagtggg atagtatgac atttgctcgt 300

attgaaggtg gatttttctgt cgatccttga ttttctctag ccaatgctat gcaagaacag 360
cagggatctc aacaagaaag ataccttgtg aggaaggcac tcaagtctgc tctatctca 419

<210> 3813
<211> 411
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H2

<400> 3813

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cattggaata tgagaccata gtgagtgaac aagaagagaa ttactgggtgt cttttactcg 120
ttgttggtac cgatctagac accaatctag ccaggtgtac cgtcatcggt gctttctgct 180
caggcgtgga tagtccgcga cctgtgacag gagcgggac ttgtctacgc cgaagccgga 240
cgggccacgg gtgcgcagag gcggtggcgt tcgccaacag cacctggatc taacctcccg 300
aaagggaccc catcacgaag aagagatcat agggtttata ttgggattaa cataccaccc 360
aagacacctt tagacgacgt gaagccgaag agaggtgaaa ataaagatga g 411

<210> 3814
<211> 343
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H5

<400> 3814

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agaaggagag agagaaacag gggagcgccc cccactcct ctctcgtgcc aagaaaccac 120
cattcctaac ggatttctac ccagtcttct ttaggatttc cgattcgggt ctccggtgag 180
agggtgggaa ttttattttc ctccgctgca accggtgcaa acatttcgaa tccctccatt 240
gcattcctct ccgtgcaatc ggccattcat atgttccttg gctgcattga ggcatcggtg 300
cgcaatttt gatgtgagct gaccagacat ggctgcgaaa gac 343

<210> 3815
<211> 402
<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H6

<400> 3815

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cccggggccga cacacgcgtc cacgcattca gtcctcgtt ttttctctct cctctcttcg 60
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gaggaaacca tcattcctaa cggatttcta ccagtccttc tttaggattt ccgattcggg 180
tctccggtga gaggggtggga atttgatttt cctccgctgc aaccgggtgca cacatttcga 240
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aggcatcggg acgcgaattt tgatgtgagc tgaccagaca tggctgcgaa agacggctcg 360
ggatcacagg atctgggggg gcacacgttc tggcccatgc tg 402

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<210> 3816

<211> 405

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-051-Q1-E1-H9

<400> 3816

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cgccgtgtgc accgacacca taactgggcg caacttcgtg atcgccattg ttgagttcgg 120
tggttcattg ctccagatcg acatcgtgaa cctgttgtag atctgcgagt gcaacagcgt 180
gcccgatgtg gccaaactact gtaagcaggt gatcaagatc acagattaca atcagaacca 240
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ccatggcttc gccttcacga aagacaccgg tcacagtagg gtgaccccg ccattgacgt 360
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<210> 3817

<211> 433

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-A1

<400> 3817

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gccgtcggcc tggtcctcgt gtgctgtcc gccctctgcc gcggcgagcg gtcggggcg 180
agggagtgcg aggacctggg gttcaccggc ctgctctct gtcgcgactg caacgcgctc 240
tccgagttcg tcaaggacca agagctggtg gaggattgcc ataaatgttg caccgaggat 300
tcagatgatt ctatcagcaa gtcacatct tctggtgcaa ttattgaggt gtgcatgang 360
aaactggtat tttatccaga agttgttggc ttcctogaag aagataaaga cgacttccca 420
tatgtgggaa ccc 433

<210> 3818
<211> 237
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-052-Q1-E1-A10
<400> 3818

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caatgagacg ctttgcttca aaagtacgtc gtgataacca caaagagctt gattttaatc 120
gtcggtaatg ttcaaaggat cgcaaacgct catcggatgg atcaacacga gtgcgcaatc 180
agacatcgat tgaaccattg tcattgcagc tttcatagct tctgctgtg cgccatg 237

<210> 3819
<211> 402
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-052-Q1-E1-A12
<400> 3819

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caacgaaaat gtgcgcgcc acagctgcgg tctcttcta catcctcgcc gtgcgtgccc 120
tcagcgcggc cgaggcaccg gcagagtcac cgaaggcagg cagtcttgcc aagggaacgg 180
ccgagtcacc gaaggcaggc agtctgcag ctctgcca ggcacccgag tctgctgcca 240
cgagaactgc ccccgctaag gcacctcaag ccgcctccac ccccgccgct gccgctgccc 300

catcgtcgtc gtcgtctagg aagtctgggc cagctgccgc gccgaccacc gccgcctcta 360
caccgtcttc ttccacggac gaagagttga gcccttcgcc gt 402

<210> 3820
<211> 341
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A3

<400> 3820

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gcaactaccg ctactgcgcc cccgaatacg ccatgaccgg caagctcacc aagatgtccg 180
acatctacaa cttcggcgtc ctgctgctcc aactcaacaa cggccgcgcg gccatcgaca 240
ttggcaggcc gtccgaggag caggctctac ttaactgggc ttgcctctg ctgagagaca 300
agaggatgtt cgtgaaactg gccgaccggt ttctgggcaa c 341

<210> 3821
<211> 360
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A5

<400> 3821

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atagataaga gcattgatat cactaagatc acaccttcaa caagagttgc tcttcggaat 120
gacagctata tgctccatct gatcctacca agcaaagttg atccattggt caatctcatg 180
aaagttgaga aggttcggga ttctacctat gatatgattg gaggccttga ccagcaaatt 240
aaagagatca aagaggtcat tgagcttcca atcaaacatc cggaactgtt tgagagcctt 300
ggaattgcgc aaccaaaggg tgccttctt tatggacctc cgggcacagg aaagacattg 360

<210> 3822
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A6

<400> 3822

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tcccccaaat ccagccgtcg gcacctccgc ttcaagatgc agatctttgt gaaaaccctg 120
actggcaaga ctatcacctt cgaggtggag tegtctgaca ccattgacaa cgtaaaggcc 180
aagatccagg acaaggaggg catcccccca gaccagcagc ggctcatctt cgctggcaaa 240
cagcttgagg acgggcgcac gcttgctgac tacaacatcc agaaggagag caccctccac 300
cttggtctcc gcctcagggg aggcattgcag atcttcgtga agacctgac cggcaagact 360
atcacctctg aggtggagtc ctccgaacac attggaaacg tccaaggcaa agatcaagga 420
caaggagggc at 432

<210> 3823

<211> 427

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-A7

<400> 3823

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gagccgcagc atggcatcat cggccgcgct cttggtgcta gccctcgcgc tagtggcggc 120
caccgccccca caggtagcgg aggcaaagaa gaagagagcg gcggagagcg gcgaggcggc 180
ggaggcgaag aagatccagg acgacttctg ctgcagcgtg tgcgagggca agaaggggac 240
ggacctggtc gtgtgcaagg agtcctgcgc gctctcccag cagtccaacc tgggtgctgta 300
cggcaggatc cagtgcaagg gcaagtgcac cgagcagaag ggcatcacgg cgccggccat 360
gaaggtctgc caggaggagt gcgacaaggc gtacgtggtg aaggcggccg anggtcacia 420
ggcctgc 427

<210> 3824

<211> 375

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A8

<400> 3824

ccacgcgtcc acgagcgatc tcctctccct ctcctctctc gatccattct ccagcgcagc 60
gaagtaaaca tgtctgaccg ggcaaagatg tcgtggcagg cgtacgtgga cgagcacctg 120
atgtgcgaga tcgagggcca ccacctcgcg gggcgggcca tcgtcggcca cgacgggtgcc 180
gcctggggcg agagcacggc gttccccgag ttcaagaccg aggacatggc caacatcatg 240
aaggacttcg acgagccagg gcacctcgcg ccgacaggcc tgttcctcgg acctaccaag 300
tacatggtca tccaaggcga gcctgggtgcc gtcattccgtg gcaagaaggg atcaggaggc 360
atcacctga agaag 375

<210> 3825

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-A9

<400> 3825

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gaggtcagga tgaaatctgt ggagaggcag atcacttcgt tacagatggc tcacagtcac 120
agccagaccg ctggcgtaag cgtaaggaga gatggatcga cgaggcacat ccagggatca 180
tctcgtggag gccttccgcc gtcgtctcag ccatcgtcag tgaggcgcca gcagcgcggt 240
tccgagcccc ccgctgccga cgagagccag aggacgacac tggcggagcc ggtagtgaac 300
cagctggcca gggagtcca cacggggacg gaggcgttcg agcacaacgc gcccgcctg 360
gccgaggcca acaggctgcc g 381

<210> 3826

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B1

<400> 3826

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tcaacgctgc acgtcaggct cgccgtgggc tccgaggagg aggaggacgg cggcggcaaa 120
aagaagcccc acgtcaacca cggcaagttt aaggcggagc cgtggacgga cgggcacgcg 180
acgtactacg gcgggcgcga cgggttaact gacaccacgg acggcggcgc gtgcggctac 240
aagggcgagc tggggaaaaga ctacggcacc ctgacggcgg ccgtgggccc gtcgctgtac 300
accaacggca ccgggtgcgg cgcggtctat gagctcaagg gcccgaagg caccgtggtg 360
gtgacggcca ccaacgaggc cccgccgccg gtgagcgggc agaaggcgga gcacttcgac 420
ctcaccatac cg 432

<210> 3827

<211> 407

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-B11

<400> 3827

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atcaatcctt gccaaataaa ccctggcctt gcccttcctt tcctcgtecc caattcccaa 120
caaccccccc ttcggctccg gaaaacaaaa ccaattccca atggaaataa aaaaggtecc 180
ctgccccgtc ctgcggcggc cggcctcggc caccgtggtc ccccgccgcc gagggccggc 240
gccccccca acagcgcctc ctgggccggc ttccggccgt cgcccggtgt ggccttcctt 300
gctctccttc ttgcctact acctgcagta aaattaaagg aaggctcngac ggagatgctg 360
ctggctgcca ttgcctgtat tcggttggat tccgtttata tatatat 407

<210> 3828

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B2

<400> 3828

gggtcgagcc acgctccgc tctcactcca tctctcaacg cctgaagctc accgcacctc 60
ccctcctcgc cgcggatccc ccactactcc ggtagaaaat ggctgacgct gaggatatcc 120
agccccctgt ctgcgacaac ggaactggca tggtaaggc tgggttcgcc ggcgacgacg 180

ctccgagggc cgtcttcccc agcatcggtg ggcgcccgcg ccacaccggt gtgatggtgg 240
 ggatggggca gaaggatgcc tacgtcggcg acgaggcgca gtccaagagg ggtatcctga 300
 ccctcaagta ccccatcgag cacggaatcg tcagcaactg ggacgacatg gagaagatct 360
 ggcacacac cttctacaac gagctccgtg tggctcccga ggaacacccc gtcctcctca 420
 ctgaggcgcc cctga 435

<210> 3829
 <211> 461
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-052-Q1-E1-B3

<400> 3829
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 gccacgtcgc cgcagcatgc cgttcttggc gccaggctgg cgaggagcca gtcgtcgtctg 120
 gcttgctgga acgccgccgg tctcggccgg cggcgcggcg gggagcacac gatcaggcgc 180
 gctctcagcg cgagcatcga cagcgtcggg agcgacggcg gggacgacga ggagttctcg 240
 aggaggatcc aggagctcgc ggtgggtcag caccggggcg ccggcggtcg cnggtggccg 300
 gcgagcgtgg agcgagcgc gagcagcgtc gggctgccgc tgtcnctgcg gatgctcaaa 360
 cggaggaagc agcagcagct ggagcatggg cgggtgggacg agcggtcggg cgacagcgcc 420
 ggcgagtctg cgcgcgccgc ggtggggcgc gccttctcct c 461

<210> 3830
 <211> 460
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B4

<400> 3830
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 ctgcggcgtc atcctcttcg tgctcctcgc cggctacctc ccgttccacg acgccaacct 120
 ggtggagatg taccgcaaga tcagcagagc cgacgtcaag taccgcaggt ggttctcccc 180

tgagctccgg cggttgatgc ccaagctcct cgaaccgaac ccaaacaaca ggatcacgat 240
 cgagaagctg gtcgagcacc cctggttcaa gaaggggtac aggccggccg tcatgctggc 300
 acagccgcac ggctccagca gcctcaagga tgtccaggtc gccttcagca acgccgacca 360
 caaggacagc agcaccaagg tggaacagcc ggcgacagc tccttgaagc cggcgagcct 420
 gaacgcgttc gacatcatct cccactccag aggggttcga 460

<210> 3831
 <211> 437
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-052-Q1-E1-B6

<400> 3831

ccacgcgtcc ggcgggaaat gccggcgggc gcggccatga cgacgaggcg ggtgggtgctg 60
 gaggtgctac ggtcggcctc ccgcgacgcc ttccagggtg ccttctcctt cgcggcgagg 120
 ccgcccgtgt ccacatgct caagccggcc atcaccaagc ccctctacca ccaccaccac 180
 gacaacgact aatctggcgc agatctacag cacggccgtc ggcatgcctt cacagcccgg 240
 tgggtgtgac gactattgat gacgtactac cacatttcgt cgctcctatt ctagtaagca 300
 acgcanaaga aaatgttgta agattgagcc tgagagcttg agtcaccaat gtaaattgta 360
 tacgactgac tatatataga gcatgctctg taaccatata tattgcccgg gcccccttg 420
 ccctcgcaat ctatgct 437

<210> 3832
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B7

<400> 3832

ccacgcgtcc gccacgcgt ccggtcctct cctctgtccc tctacggtgc ttctgctcgc 60
 cggcccaaaa tcgcctcatc gaccacgcc ccttcaggc tcccgtctcc atgggtctcc 120
 tctcaaacag gattgggagg gagagcctca aggcggggga tcatatctac tcctggaggg 180
 cggcgtgggt ctacgcgat cacggaatat atgtgggcga tgataaggtg atccatttca 240

caagaggaag aggacaggag gtcggaacag gaactgtcgt cgatattatt cttgtgagtt 300
ccaccccaaa acgaagcaac acgccttgcc cgggtgtgcac cgacgaaacc agcgacagca 360
gcacagagac gaacggcgtg gtatcctcct gtctcagctg cttcctagct ggggggtgctc 420
tctac 425

<210> 3833
<211> 375
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-B8

<400> 3833

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gccgcgccag ccgctgctcc ccagtttctt ctacgcggcg tcgtccggcg tcaacggcag 120
cagggaggcg cctccggtgg tggcggggcg cccgagcgag ccgctcggca agatcgagat 180
gttctcggcc gcatactacg cagcggggcg cttgggaggc gccgcggcct gcgggttcac 240
gcacgccgcc gtcacgccgc tcgacgtcat caagtgaat atccagatcg accccgccaa 300
gtacaagaac acctcgtcgg cgttcagcgt ggtgatgagg gaagcaggcc tccggggcgt 360
ctacaggggg tgggc 375

<210> 3834
<211> 449
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C1

<400> 3834

ccggtcaaga attatcgggt cgaccacgc gtccgccac acgtccgatc aagccagaca 60
acttccttat aggcttaggt cggaagcta atcaggctta tatcattgat tatgggcttg 120
ctaagaaata caaggacctt cagactcata aacacatccc atacaggag aacaaaaatc 180
tgactggaac agcacgttat gctagtgtga atactcatct tggaatagaa caaagcagga 240
gagatgatct ggagtctgtt ggctatcttc tgctatattt tttaagagga agcctcccat 300
ggcagggcct taaagctggc actaagaaac aaaagtatga taaaattagt gaaaagaaaa 360

tgcttacctc ggcagagatt ctgtgcaaatt cttacccgcc ggagttcgtc tcatattttcc 420
actattgtcg ctccctgcga tttgaagac 449

<210> 3835
<211> 446
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-052-Q1-E1-C10

<400> 3835

cggctctagaa ttcaccgggt cgacccacgc gtccaccac gcgtccggca gccgtggccg 60
ctctgctggt gttcgccggt gtgtcgctg ccgcgcgcg ggtggcggcg gagggcgagg 120
cgaaggcgaa ggctgtggga ggcgcgccgt cggtgcccgc tggctcgctg gacatcgcg 180
agctggggtg caaggcgac ggcaagtcgg acagcaccac gatggtgctc aaggcgtgga 240
agcacgcgtg cgaggcgacg gggcagcaga agatcgatc cccaaggggc aactacctga 300
cgggcgcgct ggacctggtg ggcccctgca agtcctccat catcatccgc ctgcacggca 360
acctgctcgg cancgcgac ctcaacgcgt acaagaggaa ctggatcgag attcagaacg 420
tcgacaacct gtccatcaac ggccac 446

<210> 3836
<211> 100
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-052-Q1-E1-C11

<400> 3836

gacgcacggt tccaaaataa atcatattaa aaatnaacaa tcagaaaaaa aaaaaaagg 60
gggggcccc caaaaggatt caagcctacg ttagccttga 100

<210> 3837
<211> 438
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C2

<400> 3837

ccacgcgtcc gcgggtgctgc cggacacggc gttccaccag gtgttcatca ccccgggcgg 60
cgtgatccac ctccgcgacg gcgccaactc gcagtacgtg accagcacgg cgttctctgct 120
ggtggtgtac gcggacctgc tgctgctggac ggggcagacg gtgctgtgcg ggaaccagcc 180
gctgcccccg gcccggttgc acgagttcgc gcggcagcag atggactacc tgctgggcgc 240
caaccgcggg cacagctcct acgtcgtggg cttcggcgcc aaccgcccc aacgcagccgca 300
ccaccgcggc gcatccaccc ccgtgctgcc ccccggcacg gacgtcaact gcggcctcag 360
cttcggggac tggatggcgc ccgacaagcc caacccaac gagctcaccg gcgccatcgt 420
cggcggggccc gacaagaa 438

<210> 3838

<211> 459

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C3

<400> 3838

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cccgccttca cgctccctc accaaataat gtcccgccct tttccgacat tcacaggggg 120
gacaggaaat cagcggccat ggctcgtatt ccggcgacga ccttcgccgt catcttatcc 180
gtcctcttct gtgcgcggc tggcaccgcc gtgcacaacg acctccccga ctacgtcatc 240
cagggccgcg tctattgcga cacctgccgc gccgggttcg tgaccaatgt caccgagtac 300
atcgcgggcg ccaaggtgag gctggagtgc aagcacttcg gcaccggcaa gctcgagcgc 360
tccatcgacg gggtgaccga cgggaacggc acgtacacga tcgagctcaa ggacagccac 420
gacgaggaca tctgccacgt ggtcttggtg gacagcccg 459

<210> 3839

<211> 355

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-C4

<400> 3839

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tggtggggccg tcggcgtgct cgcctacgag atggcggttcg ggcggaacgcc gttcaagggc 120
cagaaccgca aggagacggt ccggaacgtg ctgcagcagg agctcgagtt cccggggggac 180
acccggtggc ggacgccgga gctcgcggtat ctcatctcgg gcctgctgga gcgggacccg 240
aggaggangc tcgggtacgc cggccgcgcc gacgaggtcc gggcccaccc gttcttcgcc 300
ggcgtcgctt gggacatgcc cagggaggtg tccaggcccc cctacaaccc gccgc 355

<210> 3840

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C5

<400> 3840

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attcgccgga ggaaactgac cgccgccttc tcgctctcgc tctctaccct attcccgggg 120
ctgagagggg aggagagaag gccacgtcca caccataaag caggacgtac agacacgtgt 180
acgaggggga tcacggtcgg gtgaggtgac taagctggcg gacggaacga cgacgatggc 240
gaggagcggc ggcgggatgg aaggcagcgg cgggctgaag aaggggccgt ggacgcaggc 300
ggaggacaag ctgctgaggg accacgtgcg gcggcacggc gagggcaact ggaacgccgt 360
gcgccgggag acgaggctgc agcgtgcgg caagagctgc cgtctccggt gggccaacca 420
cctccgcccc aacctc 436

<210> 3841

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C6

<400> 3841

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aactaataaa actctcaccg ccgccatccg agagaacaag ccaaccgacc ccgtcccca 120

ggcaatccgt cgccgacgta ccaccgccac cgcaggagcg agatggagat gaagaggatc 180
ctcttcgccg tcctcgtcgt catcgccgcc tcggccaccg cagtgtggc ctccaccgag 240
gccgccgccg cgggcgcccc aactgcctcc gagtcgtccg ccgaggctcc cgctggcgct 300
ggcgtggcg ctgccgtgg cgccgccgcc ggggggccct ccgccagcag cggcgcgccc 360
gccctcgccg ccgcgcccgc cgcgtcctc ttctcctcc tcgcctacta cctccactaa 420
gcgtgtgcgt g 431

<210> 3842

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C7

<400> 3842

ccacgcgtcc gaaagaagtc gcctaattct ttcgatcgaa ttaggcgcct tcttcgtccc 60
acgctccgtc tttatttgta atgtgaagct tacaggaaca tttgagtgga tcatggacgg 120
attggtaggc ctcttgaaag tccgggtggt gaggggcac cacttgccct accgcgacgc 180
aagaggcagc gatccgtatg tcgtcctacg acttggaag aagaaactta agacgagcgt 240
gaagaagaga tctgtgaacc ccactctggca cgaggagcta actctgaccg tcacagatcc 300
cagcctagct ctgaagctgg aggtgttcga caaggacacg ttcagcaggg acgacccgat 360
gggggacgcg gagatcgacg tggcgccgct ggtggaggc 399

<210> 3843

<211> 392

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-C8

<400> 3843

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agcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaataaaaaa 120
taaaagaaaa aagaaaaata taaatataaa aaaaaaaga aaaaaaatca tttaaaatag 180
ttaaaagagg tgaaggagat ggatttttaa gtaaagggat cgaattggaa gtctgataaa 240

aaagtcttca gcgttggcta cattggtgtg ttagcggatg ggggtgtgctt ggattttctg 300
 gggggggggg cttcgtaggt ttcattgtttt tttgcgggtg tgggggttatt gtggggggtg 360
 ccgtgggggg ttttgcggtc aagccgtggg gg 392

<210> 3844

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-D1

<400> 3844

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 ctctcgacc cgcttctccc eggtccgtg gtgaagatgc tcaaggcgaa ccgcatcgcc 180
 agggtaaga tgttcgacgc cgactcctgg cccgtcggcg cgctcgtcga ctccggcatt 240
 gaggtcatgc tcggcatccc caacgacatg ctggagacca tgagcagcag ctacggcaac 300
 gccacgatt gggtaagga gaacgtcacc gcctacggtg acaagcttaa gctcaagtat 360
 gtggcagtgg ggaacgagcc atttctcaaa gcatacaacg ggtcattcat gaaagacaac 420
 cttcccggcg ctcaagaaca 440

<210> 3845

<211> 438

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-052-Q1-E1-D10

<400> 3845

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 ctacgagaat atcaagatgg aggactcagc caaccccatc ttcacgcaca tgaagtactg 120
 ccccaacaag ttgtgtaccg ccaacggcgc ctccaaggtc accgtcaagg acgtcacctt 180
 caagaacatc actggcacct cctccacccc ggaggccatt agcctgctct gcaactgcaa 240
 ggtcncatgc accggcgctc ccatggatga cgtcaacgtc gagtatagcg gcaccaacaa 300
 caagaccatg gctatatgca cgaacgcaa gggcagcacc aagggttgcc tcaaggagct 360

tgcattgcttc tagaccctcc gtgcactgac ncatctctct agttataatt tttctctcgt 420
ccttgcatg catattag 438

<210> 3846
<211> 233
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-052-Q1-E1-D12

<400> 3846

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attaccaata tgcagcgatt ttctcgcaaa gaaggagctc aatgcacatg cttgtttgtt 120
cacattcctt tttctgctct gagtttctgc tgatgcatgt gtacgacagt gtaatttgat 180
gtttgtccac gctttcgagc taaggcttta atctaaaata tcttctattg ttt 233

<210> 3847
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-052-Q1-E1-D2

<400> 3847

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agtcgcgggt gcaccggtgc gcggcggtccg tggacttcgg cgccggtggg agcccgtgc 120
tgcccccgac cgtgaacgcc gcctcgctgc acgcgcactt cgaggccgtc gccgccgaca 180
cggtcggcgc gggcgccgtc cgtggcgcca tggagccctg catgggcagc gaggacttcg 240
cgtccttctc ggcgggcgtc cccgcctcgc acttctactt cgtcggcata gggaacgagg 300
cgatcggggc cgtgcacgcc gcgcactcgc cgcactttct tgtcgacgat ggtgcgctcc 360
cgtacggcgc cgcgatgcac gccaacctcg ccatcgagta c 401

<210> 3848
<211> 408
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G4

<400> 3848

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gacggccacc gggaaatctt cttctccggg tccatccact acccgcgag cccgccggac 120
atgtggcccg agctcatcgc caaggccaag gagggcgggc tcaacacat cgagacctac 180
gtgttctgga acatccacga gcccagagaag ggtgagttca acttcgaggg gcagaacgac 240
gtggtgaggt tcttcagct gatccaggag cagcatgt acgccatggt ccggctcggg 300
cccttcatcc aggcagaatg gaaccacgga ggactgcct actggctaag ggagatccct 360
gacattgtgt tccggacgaa caacgagcca tacaagatgc acatggag 408

<210> 3849

<211> 436

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-037-Q1-E1-G5

<400> 3849

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cggccaacaa ctacgccgc gcaaccgcca catcagccat gggcgctgc gcaaccaagc 120
ccaagacgct tgaggggcag gcccagctg aggcgcgct ctccacacc aaggttgcc 180
ccgaggccac tccaatctcc gttgaggttg cggctgatga acaggtagct gagaaggtgg 240
tggtggagga gccggtgcg gcggccgacg ttgagcatca gaaggctaag gaggtggtcg 300
ctccagaggc ggccgtgcc gagccgatc acaagganga ngaagccgtg gagaagaccg 360
tcgtcgagga agagaagcca gcggcagccg ccaatgcaga ggacaaggtc gccaccgccg 420
ccgagaccac gacgac 436

<210> 3850

<211> 441

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G6

<400> 3850

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ctcctgctgt cgctgctggt cgccgtgcta gcggtggccg ccgatgtcgc caacgccggc 120
cacgccaagc ccctgacgcc tggcgggcgc gtggtacacc acaaccacgg caagttcacg 180
gccgggcccgt ggaaacccgc ccacgcgacc ttctacggcg ggcgggacgg gtccggcacc 240
acggcgggcg cgtgcgggta caaggacacg cgcgcgcagg ggtatggcgt gcagacggtg 300
gccgtgagca cgggtgctgt cggtgacggc gcggcctgcg gcgggtgcta cgaggtgcgc 360
tgctgggaca gccctagccg ggtgcaggcc cagcgcgggg aactggtgg tgacggcgac 420
cgacctgtgc ccgccaacg a 441

<210> 3851
<211> 420
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G7

<400> 3851
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gccaatgta agaccatcgt cgcagcagtc ctcgtggttg ctctcgtggt ttcgacgac 120
ccagccagcg ccgatacgaa cctggaacct gcaggaggct ctacggaggg cagtgcccg 180
acctccggca tgcagaagga agagaccga ggcaacaaga agccagcgac gtcgctgga 240
tctcttggtt caggcaagaa tgccatctac gggtaaatga ttagaaggaa tcctgcttcg 300
gaaggtatga aaacaatggg gatgtgctca acaatcaatc tcaacccag gtgacggcaa 360
tgagtcaccc acaggaatgt aaccggatat agatggacat tgctcgttcc atatttcttt 420

<210> 3852
<211> 404
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-G8

<400> 3852
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cctcgaacgc caggttcctt ggaccactat atccaggagc gacgaagtga tccacccgcc 120
agccatggag atgaagaagg tcctctgcgc cgccctcgtc gccgccgctt cggccaccgc 180
cgtgctggcc tcggtcgctt ccgaggcgcc ctccgaggcg cccgccggcg cggccggtgg 240
tgcggtggc cctagcgcaa gggcgccgc cgccgccgct gtgcccgcg cggggcgct 300
cgtcgctcc ttctcgctt actacctca ctgagcgagc acgcgcgggg cggcaacgtt 360
gggatgcac gtgtntggtt catccgatta attaattggt tttt 404

<210> 3853
<211> 436
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-G9

<400> 3853
ggtccagaat tcacgggtcg acccacgcgt ccgtccgctt caaggctctc atctcgatg 60
tctgataggc aacccaataa tggcagaagt cctatcatga tctcatgaac actgtctaag 120
ctctgcctta gatggacact acgacgagaa caggatatcc aatgtggaat acacagatga 180
cgacaagaaa gccgtgatcg cggctctgaa aaagaaggct ttgatcgctt cacagaagtt 240
tacgcattcc atgaacacgg ggatgaagag cagcaacgtg atgtccatct cgattctgga 300
tgagcgtgaa cctgaggagg tgcacgctgt ggatgccttc cgccagcttc ttgtacttga 360
agagctgcta ccatcgagc atgatgacta ccacatgatg ctaagatttc tcaaggcaag 420
atagtttgat atcgag 436

<210> 3854
<211> 421
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-037-Q1-E1-H10

<400> 3854
cgggtcgagc cagcgtccg gatttcacat aaacttgag accttgagcc ttcaagggtg 60
ccaaagcttg cagagacttc ctccgtccat cagggcattg ctagagctta gatgcctttg 120
tctctatgga acttcnctaa gctatgtacc aaagggtggt ggtaaattga agcatctcaa 180

tcatctagat ggttataatca ttggtcatga caacaatgcg cctgaggggtt gtgacttaga 240
 tgaccttaaa gcattgtcag aactaaggca cttcatata aagagtttgg atanggctac 300
 ttccggtgcg tctgcactcg caaacaagcc attcctagag gatctgtacc tctctgagca 360
 agcaccagca atagaaaatc aggaggatct ggangacaaa gatgaaacag aaaaagaaga 420
 g 421

<210> 3855
 <211> 436
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-H2

<400> 3855
 cacgcgtccg gaacctcttc gctcctcca ttgaccaaca attaagcctc cccgaccgcc 60
 acatctatta ggtgcagcca tgggtgcctg tgcaacgaag cctaagacgc ttgaggggaa 120
 agccccagct gaggccacca tctccacacc caaggttgca cctgagacca ctaccatcca 180
 cattgaggtt gcggcaaaac atgcagtagt tgagaaggtg gaggaggaca aggaggaggc 240
 actaacagtg gcggcgaaac aagagccagc agccaccatt gaggctcagc agattgctag 300
 tgaggtgacc acttcggaag tggcggtcgt cgttgtcgag cctgagaaca aagaggagga 360
 ggaagttgtg gagaagaccg tcatcgagaa ggagaagcca tcagcagtcc atgcaganga 420
 aaatattgcc cacaac 436

<210> 3856
 <211> 419
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-H3

<400> 3856
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 gcgccgcggc gcagcaggtg ccgccggtgg gcggcagcgc tctgaagccg gactactaca 120
 gccagtcgtg cccgcgcgcg gagaggatca tcgcggaggt gatgcagacg aagcagatgg 180

cgaacccgac gacggccgcg ggcattgctgc gcggtttttt ccacgactgc ttcgtcaccg 240
 ggtgcgacgc gtcggtgctg atcgcgtnca cccagttcca gaagtcggag caccgacgcg 300
 agatcaacca ctgcgtcccc ggggacgcct tcgacgccgt ggtgcgcgcc aagctggccc 360
 tggagctgga gtgcccgggg tgggtgtcctg cgccgacatc ctgcgcgtgg cgtcggggg 419

<210> 3857
 <211> 131
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-037-Q1-E1-H4

<400> 3857

cacaccctat agtgagtcgt attaaactgg tcgcgctcac ggtgcgcgcc gcggcccagc 60
 aagtgcctac gtgtagccgc agtccctgt acacggacta ctacagccag tcatgggagc 120
 gcgccgacag g 131

<210> 3858
 <211> 422
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-H5

<400> 3858

ccacgcgtcc acggacgcgt gggtgaaatc tcgccctcgt tgcggtcgtc cacatccttt 60
 tctctcctcc tcgccggccc aacctgattg ttcttcaacc aagaggaaga aaggaaggaa 120
 gggaccggaa gcatcagcca tgtcgaactc ggcgtcggga atggccgtct gtgatgaatg 180
 caagctcaag ttccaggagc tcaaggcaaa gaggagcttc cgcttcatcg tgttcaagat 240
 caacgagaac gtgcagcagg tgggtggtgga caggctgggg gggccaggag agagctacga 300
 cgccttcacg gcctgcttcc ccgccaacga gtgccgctac gccgtgttcg attttgactt 360
 cgtcactgac gagaactgcc anaagagcaa gatcttcttt atctcttggg ccccgatac 420
 at 422

<210> 3859

<211> 440
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-H6

 <400> 3859

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 cttcaatccg tccggcggcg cccccaagca ggtcgacacc aacgagtggg taaagcccaa 120
 gccaggaacc tacgttaciaa ggctcacccg cttctccggc aactgtcctt gctgcacggg 180
 caagccgtgc tgaaggccgg tgggcatcag gctgcttctt ctagctcatg gcctggccat 240
 gccaggctgc gctggctgcg tttcatttca tggaagaaag caaggatgga tcacaggttg 300
 tcgttctgct aattaatcta catacgtttg cttcaagta ctgtgttggt gcattgttac 360
 acatcacagt acagtttggg caaatTTTTT ttccacagag gaagtangga ttgatttaat 420
 cattgattta atccccacag 440

<210> 3860
 <211> 426
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-037-Q1-E1-H7

 <400> 3860

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 gtgagctcac caccacctcc agtgaagtct cctccgccac cagcaccagt tagctcccca 120
 ccaccccaaa taaaatctcc tcctccaccg gcaccagtta gctctcctcc accagcacca 180
 gtgaagccac catcactacc accaccggcc ccagtaagct cacctcctcc ggttgctcacc 240
 cctgccccgc cgaagaaaga agagcagtca ttaccaccac cagcagaatc ccaacctcca 300
 ccatcattca atgacatcat cttccacct atcatggcca acaagtacgc atctccgcct 360
 cgcctcagt tccaagggtta ttaagcgcca cagagacatg gttgatgaag catgaaagga 420
 acagtc 426

<210> 3861
 <211> 414

<212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-037-Q1-E1-H8
 <400> 3861

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 gcagcaggtg gccgcccggg cgcgggaggg cggcgtgggc ctggccggcg agaacgcgct 120
 gccgcgctac gacgacacgg cgcacgacca ggtggtggcc actgccgcgg acagggccgc 180
 cgaggaccgc atggtggcct tcacgtacct gcgcatgggg cccgacctgt tccagcccga 240
 caactggcgc cgcttcgccg cgttcgtcaa gcgcatgacg gagccggggc cgcgggaggg 300
 gtgccgggag caggtggagc gggaggccga gggcgtcgcg cacgccaccc agcccctcgt 360
 gcacgaggcc gccgtcgcg tcnacaactg accggaccgg ccggcggttcc ccgt 414

<210> 3862
 <211> 435
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-037-Q1-E1-H9
 <400> 3862

gggtcgacgc acgcgtctaa gataatccac acgaggacaa ccttgtcacc accggcaagg 60
 gaaagctcga cgggcagggg ccagccgtgt ggagcaagaa ctctgcgtc aagaagtacg 120
 actgcaagat ccttcccaac tcgctggtga tggacttcgt gaacaacggg gaggtgtccg 180
 ggatcacgct gctcaactcc aagttcttcc acatgaacat gtacaagtgc aaggacatgc 240
 tgatcaagga cgtcaatgtg acggcgcccc gggacagccc caacacggac ggcattccaca 300
 tgggcgactc gtccggggtc accatcacca acaccgtcat cggcgtcggc gacgactgca 360
 tctccatcgg ccccgggacc tccaagggtga acatcaccgg cgtgacctgc ggccccggcc 420
 acggcatcag catcg 435

<210> 3863
 <211> 419
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A12

<400> 3863

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caaattaatc gactcgggtg gctccatctt ccgcggcagc gacgtcctgc cctgggtgcga 120
tcccgcacatc atcgccgggtt tcgagagtga ggttgctgag gctgcaaattg aagaacagaa 180
aaccgagagc ctgatgaggc tctcctgggc gcttggtcac tctagacagc ctgaagatgt 240
caaccggggc atcggaatgc ttgaagcttc attggacagg tctagcagcc cagaggaaac 300
aagggagaag ctctacttgt tagctgttgg tcgttacaga actggggatt atacaagaag 360
ccgacagctt ttggaaagat gcttagagat ccaacatgac tggagacaag ccataactt 419

<210> 3864

<211> 442

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A3

<400> 3864

ggtcgacgca cgcgtccgca agctcctgct caccattcca agaatccttg agcttgctga 60
agagctgtct atgccacttg ctgctgtgaa gtactcccggt gggacgttca tctttcctgg 120
cgcacagcca gccccccaca ggagcttctc tgaggaagtt gctgcaacta accgctactt 180
tggcggcctg aaatctgggtg gtaatgctta tgtgattgga gatccagcaa gacctggaca 240
gaagtggcac gtcttctacg ccactgagta cccagagcaa ccaatggtta accttgagat 300
gtgcatgact ggtctggaca agaagaaagc ttgtgtcttt ttcaagacta atgctgatgg 360
gaacacaaca tgtgccaagg aaatgacaaa gctctctggc atctctgaaa tcatccccga 420
gatggagatc tgcgattttg ac 442

<210> 3865

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A4

<400> 3865

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gcagtcctgc agtccttgc aaggcaccgc agtctgctgc cacgagaact gccccgcta 120
aggcacctca agccgcctcc acccccgcgc ttgccgctgc cccatcgctg tcgtcgtcta 180
agaagtctgg tccagctgcc ggcgcgacca acgccgcctc tacaccgtct tcttccacgg 240
acgaggagtt gagcccttcc cgcgcggcat ccaccgccga ggtggcgctc cctgccgctg 300
atgggcctgc tgagggaccg ggcgctgctg atgcctccgc tgctgctacc cttggaagcg 360
gagctgccat cgctgggtgc gccgctgctg tcgtaccat gatcttctac tgagttcacc 420
a 421

<210> 3866
<211> 392
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-038-Q1-E1-A5
<400> 3866

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gtctgtcatt cctcgtgtac agaagaagct tagtgcctaa cacatgaatt aacggtacac 120
tgaatctatc acatgtctcg cctatatatg ttctgttgg cgcgccatcg acttggacat 180
tttggaaacc acaaaccaca cagagcaata ctgaaaaaaaa tgtgggttta cagagaaaaa 240
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagggggggc cccccaaaag gttcaaagct 360
tacttaccc tgaaggcaag ttcaaagccc tt 392

<210> 3867
<211> 416
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-038-Q1-E1-A6
<400> 3867

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cattagcatt tctggtaggc ggtgcctggt gtggtcctcc caaggttccc ccgggtaaga 120

acatcacagc caaatatggt agtgattggc tagatgccaa ggcgacatgg tatggcaagc 180
cgacaggtgc tggccccgac gacaatggtg gcggctgcgg gtacaaggac gtgaataagg 240
cccccttcaa tagcatgggc gcggtgtggca acgtcccat cttcaaggac ggtctaggtt 300
gtggatcctg cttcgagatc aagtgtgaca agccagcggg gtgctctggc aagcccgtgg 360
tggtgtacat tacggacatg aactacgagc ccattgcggc ataccacttc gaccta 416

<210> 3868
<211> 414
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A7

<400> 3868

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agttagatct actgcagcca gccttttgcg agcagccaca gcggtggcgg ccgcgccggc 120
gtcggcttca cgctcatggc tcgtgcccaa cgaagctcaa gacgagctca tgcttgtgat 180
cgtcaagcaa tcacgtcgtg atccgatcat tttgtggctc aggggaaggcg ttgtaggaat 240
gcagtgcgac tgatgttgtt gttcattgcg cgggtgcgtaa ctacgctggc tgagagatta 300
gaatgacatg ttgccagtac attacaagcg ctctgtctg atctctgttt cagaactagt 360
ttgggaaatg taagatgaga ccgtggacgc caatgtttca gatectctc cttt 414

<210> 3869
<211> 419
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A8

<400> 3869

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cggcgccaat tgaactaacg acgacgtacg tgcgaccggg ccgggcggtg gattattccg 120
gcctgagcaa tgggcaagat cgagtacggc gtggtggcgc gcggcgcggt ggtgctggcg 180
gagcactacg gcgcggcggc ggcgggcggc aacgcgggcg ccgtggcgcg gcaggtcctg 240
gagcgtctcc ctggcgcgcg cgacgacgac tgcaacgtgt cgtacacgca ggacctccac 300

gtgttccacg tcaagcgcac cgacggcctc acggcgctct gcatggccga cgacgccgcc 360
 gggcggcgtg tccccttcgc gttcctggag gacatccacg ggagggttcgt caaggcgta 419

<210> 3870
 <211> 153
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-A9

<400> 3870

atagtgagtc gtattaaaac gtgtgacata gggcgatccc gatcgtcggc cggcacgtct 60
 tgcgctagcg accagttacg tgcaacctcg ccgggcgttg cgtcactcgg gtctgattaa 120
 tgcgcatggt ccattacggg gtgtcggcac gcg 153

<210> 3871
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B1

<400> 3871

attcacgggt cgacccaacgc gtccgggtgac gacctctcct cctcgctgtc tctctgtatc 60
 tgcaactgca agcaaggaaa ttaattaaaa gaagatcggc gccatggcgg caacgacgac 120
 ggggatgcag atgatgcagg tgcagcaggc ggccggcgttg ctgctgtgct tggttgtgtt 180
 ggcggcgtct acgcgggtcg cgctgggcaa ctgccgcgac gactgcatgg ctgcatgcaa 240
 cggctggacc atcgtctgcc agctctcctg tgccagcgca tgctacggag aagtcgggat 300
 cacaacctta ggtacgtcgg ctgtattagc gaaagcagaa gcgcctgcat cagcaccaca 360
 agcagcacia gagcgaggcg ccgccgccgg cgtgtccgcg ctcagagggt tcaagctatc 420
 atcaccgacg acc 433

<210> 3872
 <211> 413
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B10

<400> 3872

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catggcgccc gtccggtccg acaggggtcca ccaccaccac cgccgctccg aggcgtcgtg 120
tccggcaacc tccgcggccg tggcggcggc gagggccgat gacgccctgc gccagcgccc 180
gcgggggctc gtgcaggtcc gggagcggga ccagggcccg ctgtcgacgg ggcaccagca 240
cctgcaccac catcaccacc agctgcggcg gtcggcgggc tccccacccc gccgcccggg 300
gccggggcgc cgccctcctc agcgtcgcga aagcgacctc aacatcaggg agcaccgctc 360
ctgcagcgag gtggccggcg gcaccgcggc gggctgcgcc gctgtgtgct gct 413

<210> 3873

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B11

<400> 3873

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cactaatgag gaagctgttg ccatggtcaa gcctattcag gacccccagg aagcagcaaa 120
caagcttctc gaagaagcgt cccgaagggg aagctctgat aacatcaccg ttgtcatcgt 180
ccgcttccta tatggaacta ccggtgataa atcaggcgca gacaaagaga ccaccaatga 240
ccaaaactcc taattacctc ctgtagggat ccctcatgcg tgtgttttct tctggctgtt 300
gtatctgatg ctcaaagtag atgctccgtg tgtcttcgcg tgctgttccg caaggaaact 360
gactcccccg accgtcgtcg tgatgctgcc cgctcatgct cctaaacggg aatgactgcc 420
gcagaatgac gaat 434

<210> 3874

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B12

<400> 3874

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ggataccgtg tccgagtcac ctgctccaag ccccgccccc gtctccgccc cttagttgcg 120
 tgttggggcgc cgtgcccgc cgcccccccg ccaccatgcg tcgtgtctgc gcgcgcacgc 180
 acgcattgaa cgggagatag aatatggtat cgttcaatgc agattgccat gctatagctc 240
 cagagtttat ctacctggtg gcaccatgac acgatggccc gtctgtatctt tctggcttgc 300
 tcgtactttt cagttccatg gttttacaac accttttact cccagcagaa aatacataat 360
 atgcatggta ctctctttt ttttccgtat agtaatatata acaaattttc a 411

<210> 3875

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B2

<400> 3875

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 caaggaaatt aattaaaga agatcggcgc catggcggca acgacgacgg ggatgcagat 120
 gatgcagggtg cagcaggcgg cggcgttgct gctgtgcttg gttgtgttgg cggcgtctac 180
 gcgggtcgcg ctgggcaact gccgcgacga ctgcatggct gcatgcaacg ggtggaccat 240
 cgtctgccag ctctctgtg ccagcgcgtg ctacggagaa gtcgggatca caaccttagg 300
 tacgtcgggt gtattagcga aagcagaagc gcctgcatca atcaccacaa gcaggacaac 360
 aacgaggggc cgccgcgggc atgtccgcgc tcagaggggt caggcgggtca tcagcg 416

<210> 3876

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B3

<400> 3876

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 ctctggcgt cgatgctgct cgtcgggctc gccgtgggct ccgatgagga ggaggacggc 120
 ggcggcaaaa agaagcccca cgtcaaccac ggcaagtta aggcggagcc gtggacggac 180
 gggcacgcga cgtactacgg cgggcgcgac ggggttaactg acaccacgga cggcggcgcg 240

tgccggctaca aaggcgagct ggggaaagac tacggcaccc tgacggcggc cgtgggcccg 300
 tcgctgtaca ccaacggcac cgggtgcggc gcgtgctatg agctcaatgg ccccaaaggc 360
 accgtggtgg tgacggccac caacgatgcc ccgccgccgg tgagcgggca aaaaggcgag 420
 cacttcgacc tcaccataac 440

<210> 3877
 <211> 437
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-038-Q1-E1-B5
 <400> 3877

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 caggatattg aacgatgtaa atgggaactt agatgctaag aaagcttgcg ctggagcatt 120
 gaaacttcac aaaaaatacc tgaaaaaggt acaagcaaag aaaccttaaa cgtgccatgg 180
 aacacacgtc cccaatgggg ctatcgttac catttcaaca tacacgacca ttttctacac 240
 acaactttga gtgaagattt atcggacaca ggtggtaatc gtctgacatg tcctgagata 300
 cacggagact gatggtgccca ggctagtggg ttgagtacag gatgagcgca accggtagtg 360
 tgtatatcac gttctttgta ctcaagaatt ttgtacagac agaaggcggg gcggatagca 420
 tgccttgcac acataat 437

<210> 3878
 <211> 417
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-038-Q1-E1-B6
 <400> 3878

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 cctgcacgag gtggccaacc cgccggtgat ctaccgcgac ctcaaggcgt ccaacatcct 120
 ccttgacagg gacttcaacg ccaagctctc cgacttcggg ctgcgcaagc tgggccccat 180
 gggcgaccag agccacgtca gcaccagggt catgggcacg tacggctact gcgccccga 240
 gtacgccatg accggcaagc tcaccaagat gtcggacatc tacagcttcg gcgtcgtgct 300

gctcgagctc atcaccggcc gccgcgccat cgacgtcacg aggcgcgtccg aggagcaggt 360
cctcgttcag tgggtgagct gagcttttcg tttcgtttcg ttacgttttc caccagc 417

<210> 3879
<211> 452
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B7

<400> 3879

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gggccccaaa tctcaaaaag ctcaaaattt ctgaggaacg ggtgctgcct tcggaaaaaa 120
cttggctttc ccggcccggg tccccgttgt gggtttcogg aaccgccttg ggcttaagaa 180
ccaaggtatt cttgtggaag acatatcctt cgctcgcgca gacaatttcc tggcaattcc 240
ccagtggggg ctaatgtctg gtggaactac actcctgctc atgtacatga gcaacatcgt 300
ctattttcac aagctcacc cttcttttta tgggtgtgct cgctcggaat aactaaccaa 360
ccgggtggag gtattcttcg cgccgtggat cgccctgcctc ttccctcgcca tcggcgtgcc 420
gccgtccgtt gccactgagc cctcgccgca gt 452

<210> 3880
<211> 354
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-B8

<400> 3880

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tacccgataa ccatgagga attcccctat tagggtagcg gtatgagaca aaaattgtcc 120
catgggtatg gatatgggac aaaatctcca ccattgggt aaacgggtat gggtttggga 180
agcaataatc cgaaccgat taccatggg tatttcatac gcgtacacct gtcctgtttg 240
tatgaatgag ttgaggccga gtcggccatc aaaccggca ggctccattt cttatattgg 300
tcccaagtac tgatttcttt tctgatggat ggatgaatgg ataatggttc atgg 354

<210> 3881

<211> 410
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-038-Q1-E1-B9

 <400> 3881

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 atcgcattgt gctgtgtgta ggcagcccta tatacacttc ccgagtattt gtcagctctt 120
 gcatcatttg cttctaaagc ttgaaactaa tgattacaaa agaagggaaa aagaagtact 180
 agaggaagag aagcgcgatgc aaacatactc tccccaaatc attgagttct taaactacaa 240
 gactaacgtt ggaagctata aggagaacag aatgaagac agtaaagcta gacctccaca 300
 agaagttcca ttgaatgaca gcgttccaga tgagcatttg aagaaaatta aattggagga 360
 tgtttcatgc cctctctgta tggagatgct gtatcaacct gctgttctta 410

<210> 3882
 <211> 455
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-038-Q1-E1-C1

 <400> 3882

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 tcaagctcgc cgagtacttc aacgtcaccg acgggggtgtt cagctacaac cagatgggcg 120
 acgtgcccc cgccgttaac gggccactcc atgtcatccc caacgtcatc accgccgagt 180
 tccggacctt catcgagatc gtcttcgaga accccgagaa gagcatagac tccctccacc 240
 tcgacggcta cgccttcttc ggcgtcggga tggggcctgg gacgtggtcg ccggagatga 300
 ggaagacgta caacctactg gacacggtga gccggcacac gatccagggtg taccgcgggt 360
 catggacggc gatcatgctg acattcgaca acgcgggcat gtggagcgtc cgggtccaacg 420
 tctgggagcg gtactacctc ggggagcagt tctac 455

<210> 3883
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C10

<400> 3883

ccacgcgtcc gcggcgccgc acggaacgcc gccggccaag aaggaggccg tggaggcaat 60
gcctaccgtg gaaatcgccg gcggcaacga tgacgacgac gcggccagct gcccggtctg 120
cctggaggac tacgcgcccc gcgagcgcg cgcgagatg ccctgcaggc acaggttcca 180
cggcaattgc atcgtgccgt ggctcgagat gcacagctcc tgccctgtct gccggttcca 240
gctgccggcc accgacgaca agagctcatg cagcggcggc gacggtggtt tcgtcagtgt 300
cgatgcggat cgtgaaggca gtgacaacgg cgggggtgat ggtagggcaa gctctccggg 360
caacgccgag ctagctgaag ctgaagagag tggcaggcgg ttgccgccat c 411

<210> 3884

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C11

<400> 3884

ccacgcgtcc ggtgaccatc agcagcacca ccatcggcgt cggcgacgac tgcattctcca 60
tcggccccgg gagcaagatg atccgcatcc atggcgtaa gtgcggccca ggccacggca 120
tcagcgtcgg cagcctgggg cgctacaagg acgagaagga cgtggaagac gtgcaggtga 180
cgggggtgcac gatcgccggc accacgaacg gcctgcgcat caagtcgtac gaggactcca 240
agtcgtcgct caaggccagc aagttcctgt acgagggcat caccatggac aatgtctcct 300
accccatcat catcgaccag aagtactgcc ccaacaacat ctgcgtcaag tccggcgccct 360
ccaaggtggc cgtcaacgac gtcgtcttca agaacatcca cggcacctcc aacac 415

<210> 3885

<211> 365

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-038-Q1-E1-C12

<400> 3885

ccacgcgtcc gtcacgtac aagacgacgt cgtcgtgcgg cggggacgac tacgaggacg 60

gcgggcgcg cgaggcggc gaatgcggta gatctaagaa gtacgttggt cgtccgaagg 120
tagggcagac agtcccgtgc ggaggagaga ggccggcgac gggatgctgg acgcggtg 180
accggtccct cttcaagctc aagagcgaca ccttccgaaa agacaagaag aaatgcgcgg 240
ctccaaacta cgctgcctac tatccgatag gcgttgacct gtntgcctgc cccaagaagg 300
tccatcacat cgcgagcac ctgcagcttc ggcagatcaa gacgcagcca aaagatccc 360
tcgct 365

<210> 3886
<211> 80
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C3

<400> 3886
attcacgggt cgaccacgc gtccgaaaaa aaaaagataa caaggaaaaa aatgacagg 60
ctgacgtct agaggatcaa 80

<210> 3887
<211> 447
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C5

<400> 3887
aggtccagaa ctcccgggtc gaccacgcg tccgggacga ggagcgggcg ggcattccc 60
ccgccgatct cgtgatcgg caagggcggg cgccgtggc tctgctgcg ggcgcaccg 120
gagggtggac gctcgtgct gcggcagatg cgcctgccgt cgcaggagct gctgcagccc 180
tgcaaggagg acggcaggtt caagctctc atgcacccgg aggcccgcg gcggcgtgc 240
ggggcgggca cactgcagga acggcaagg aatgatagct agcgtctta attgatcagc 300
tgatcagatg atctgccgc acgcacacgt cgtcttgat gggctggctg ctacaatgca 360
accggtagat ctccctgctt agtttcttga gatcgagggc tccagttctt gctttgcac 420
ctgcaaccgt tggtcacaat ctttgcc 447

<210> 3888
<211> 436
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C6

<400> 3888

gtccgggact cccgggtcga cacacgcctc tacagtgtg ctcaccaccg gcgtggtggg 60
ctctagggcc ggcccgtgc tggccgggtg cgggttcttc gaggcggtga tcaccggggt 120
cggcggccac gccgcctccc cccacaacac catagacccc gtcctggcag cctccagcgt 180
cgtgctcagc ctgcagagcc tcgtgtcgcg cgaggcggac ccgctggact cgcaggtggg 240
gacggtgacg aggttcctgg gggcgggcgc gttcaacgtg gtcccgggct ccgtgacgat 300
cggcggcacg ttccggtgct tctcgaccga gggcttcctg cggctgaagc ggcggatcga 360
ggaggtggtc gtggcgcagt ccgcggtgca ccggtgcgcc gcgtccgtgg acttcggcgc 420
cgggtgggagc ccgctg 436

<210> 3889
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C7

<400> 3889

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gacgcgtggg cgggaagtgg tcgccggagg tgaggaagac gtacaacctg ctggacacgg 120
tgagccggca cagatccag gtgtaccgc ggtcatggac ggcaatcatg ctgacgttcg 180
acaacgcggg catgtggagc gtgcattcca acatctggga gcggtactac ctcggggagc 240
agttctacat cagcgtcgtc tcgccggcgc gatcactgcg cgacgagtac aacatgcccg 300
acaacgcctt ccgctgcggc aaggtcgtgg ggctgccgct gccgcgctcc tacgcccccg 360
cgcgctaaga cgacgaaggc ctcgttttct cctcgtggtc tgaccatcca atccaaactc 420
aaaagaacat atacgacaga agcgt 445

<210> 3890
<211> 419

<212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C8

<400> 3890

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 gcccgctcct gtactctccg cgccaggcgc ggggctcgcg gttccgggcg ctggcgccga 120
 ccaccatccc gcgcatgtac cagccacca gcgcggtgct gcccgacgcc accgtgctcg 180
 tggccggcag caacaccaac tcggcctaca acttcagcgg cgtcgacttc cagaccgagg 240
 tgcgcgctga gcgcttcacc ccgcggtacc tcgccccga gcgcgcggcc aaccgccccg 300
 cgatcgacgt ggccaccgtc cccggggacg gcatggcgta cggggccaag ttcacgttcc 360
 agttctcgac gcccggtgcag gccgtggccg agcccacct aaaggtgacc atgtacgcg 419

<210> 3891
 <211> 425
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-C9

<400> 3891

ccacgcgtcc gccacgcgt ccgaggggca caggttgtgg cccatgctgt cctacgcttg 60
 cggcgagcta tgtgtgatca tgctgctcta cgtggctgcc tttgcatccc atgcagccac 120
 aaggctggcg cgcactctcg ggctcaggcc accatgcac cgtgtgcacga ggctggaccg 180
 cgccctccat ggaaacttgc catggttctc cgcgacctg gtctgttccg tgcacggctc 240
 cgaggtctcg tctctggctc actgcaagag ccatggccgg cttgcacggt cggcgatct 300
 ctgcaaatca tgctctcttt catgcacggc ggtaggtgcc cgtgaggagg tggatgaactc 360
 tcggcctacg acatccagca gcaggttgtg ttcttctgtg tctgatccgt tcaagaataa 420
 tactg 425

<210> 3892
 <211> 449
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D1

<400> 3892

ggtcggaac tcacgggtcg acccagcgt ccggtcggag cagagagaga ctctctcgcc 60

tccatcccat cccgccgcgc ccgtctctac ggtecgtaat aagccgcgc atccagggat 120

ggagatgaag aagatcgctt gcgcgcctct cgtcgccgcc tcggccaccg tggcgctggc 180

cgcgaggcg ccggctccgt ctcccaccag cggctcctcc gcggtcgcac ccgccatcgt 240

cgggggccgcc gtggcctcct tcttcgcgta ctacattcac tgagccgcgc gacgaggagc 300

cggagccgga gggaagagac caaggtgggg ggagagactt ggctgccctg cgctgctctg 360

ctgctccgc gcattccga tgcgtgggcg tgctctgatt gggcacggcg gtggcagtgg 420

cacaccttcg tcttcctttt gtttgtttt 449

<210> 3893

<211> 446

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D10

<400> 3893

caggtctaga actcgcggtt cgaccacgc gtccagcgt ttctgttcg caagagtggg 60

agctggaaag gcattaccaa gagattttca gtgctttata atggtaagtg gctgaagaac 120

atggaatcaa catctccaag tgcagccagc agcagcagca cgcagctatc cccacgttct 180

ggttctgcag aaaagtcttg ctgcctatca agggaagatg ttctccggtt tctcattgga 240

tgcttggtg ctcttgctcc catccgcgtg actcagatat ctcccttggt agccatcaat 300

ccgcagtaca gttacgtgga agcatctgcg cctgcgatgg aagcaattca gaagatccct 360

caagacccat gcgccgttgc tgtagtggag acgatgccag atggaactcg tagcatacta 420

ggagacatct ctacttacia gctgtg 446

<210> 3894

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-038-Q1-E1-D11

<400> 3894

caaggtctag aattcgcggg ccgacccacg cgtccacca cgcgtccggc aagtgtgac 60
atccgttgat ccattcttgc aataagcctg cgtgcccttc gttcttcctc gtctcgatcc 120
cgacgacgct ccgttcggct ccggcaaacc acatcaagtc gcgatggaga tgaagaaggt 180
cgcttgccg gtcctcgccg ccgcccctc cgccaccgtg gtcctcgccg ccgaggcccc 240
ggcgcccgcc cccaccagcg cctcctcggc cgcgttcccg gccgtcggcg ccgtgctggg 300
cgctccgtg ctctccttct tgcctacta cctgcagtaa aattaaagga ggatcggagg 360
gagaggctgc tggctgcat tgcctgtatt cggttggatt ccgtttatat atatatttaa 420
gtactttaat ttgggtctga acatgtcg 448

<210> 3895
<211> 421
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-038-Q1-E1-D12
<400> 3895

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atccaaagtt ggaccgcaaa gatgagtact gctaatact atcagcacat caagtcaacc 120
aagcctgttg taggcaaagc aagaaaattg aaggatctca tgataaaaag tgataatagg 180
atatgtgctg actgtggtgc acctgatccc aaatgggcat ctactaatat tggagtgttt 240
ctttgcttaa aatgtggaga tgttcatagg gcacttggac ctgacatttc aaaggtttta 300
tctgtaactt tggatgattg gtctgacagt gatatcgact ccatgggtga ggttgggtga 360
aactcatatg caaattcaat ttatgaggct tttcttccaa aagatcaccc aaaacccaaa 420
c 421

<210> 3896
<211> 363
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-031-Q1-E1-C7
<400> 3896

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ctgctggtcg ccatgctagc ggtggccgcc gatgtcgcca acgccggcca cgccaagccc 120
ctgacgcctg gcgggcgcggt ggtacacgac aaccacggca agttcacggc cgggcccgtgg 180
aaaccagccc acgcgacctt ctacggcggg cgggacgggt ccggcaccac ggcgggcgcg 240
tgccgggtaca aggacacgcg cgcgcagggg tacggcggtc agacgggtggc cgtgagcacg 300
gtgttggttg gcgacggcgc ggcccgcggc gggcgctacg aagtgcgggtg cgtggacaag 360
ccc 363

<210> 3897
<211> 365
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-031-Q1-E1-C8
<400> 3897

tactggtcag gaattcccgg gcagaccac gcgtcagcgc ttccgctcca caggatcctc 60
tgcccccacc acaaccgtgc gaccgtccgt gctgccggcg accccgatcc gccgaccggt 120
cccgtcccac cacacccgag cggggctcgc agctatgtcg ccgtcggagc cgacgcggga 180
ggagagcgtg tacatggcca agctggcaga gcaggcggag cggtagcagg agatggtcga 240
gttcatggag cgcgtcgcgc gctccgcggg cggcgccggc ggaggggagg agctctccgt 300
ggaggagcgc aacctgctgt ccgtcgcta caagaacgtc atcggcgctc gcatggcctc 360
gtggc 365

<210> 3898
<211> 399
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-031-Q1-E1-C9
<400> 3898

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tgagctgaa gggcccctgc aagtcctcca tcatcatccg tctcgacggc aacctgctcg 120
gcaccggcga ccggcagcgc gtaccaaagg aactggatcg agatcgagaa cgtcgagaac 180
ctgtccatca acggccacgg caccatcgac gggcaggag ccctggtgtg gagcaagaac 240

cagtgccagc attcttaca ttgcaagatc ctcccgaata gcttgggtgct ggattttgtg 300
acgaacgtcc agatccgcgg catcacgtg ctcaacagca agttcttcca cctcaacatc 360
ttcgagtgc aagaacgtgct gatcgacaaa gtgaccgtc 399

<210> 3899
<211> 355
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D11

<400> 3899

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taaattgcac cgatcgagac acaggggaaca aaggcaacag ccatggcgagg aaccctgtgc 120
cggtagctcc tcgtcgcggtc tgtcgacgag ctcttagcca cgcttgcggc cgtggacgcg 180
gccacgctgg cggagatctg caggggaacc gcgttccccg acatctgcac cagcacggtg 240
gggagcgagg cgcagagcgc cgggggtgttg gacgccatgg cgggtgttgcg gatgcaggtg 300
gacgcgttca acaagcgcac cgaggcgagg agggcgacac tcaaggaagc cgccg 355

<210> 3900
<211> 346
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-D3

<400> 3900

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tcctgatgtc ggcgtgcgag aagctgagga ggccggcgcc cgggaggag gtccacgggt 120
acgcggcccg gaacgtggcc gcgtcgcacc tccacgcgtc caacgcgctg gtgcacatgt 180
acggcaggtg cgggaggctc agggacgcga ggacggcggt cgccggcatc ggggcccggc 240
cgaggaacgc cgtgtcgtgg acggccatga tcgacgcgtg ccgcgagaaac gggcgccccg 300
cggaggcgct ggggggtgttc gaggagatgc gtcggctcgc tggcgc 346

<210> 3901
<211> 404

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-D6

 <400> 3901

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 ctctgtctgt cgctgtctgt cgcgtgtgta gcggtggccg ccgatgtcgc caacgccggc 120
 cagccaagc ccctgacgcc tggcggggcg gtggtacacc acaaccacgg caagttcacg 180
 gccggggcgt ggaaaccgc ccacgcgacc ttctacggcg ggccgggacgg gtccggcacc 240
 acggcggggcg cgtgcgggta caaggacacg cgcgcgcagg ggtatggcgt gcagacggtg 300
 gccgtgagca cgggtgtgtt cggtgacggc gcggcctgcg gcgggtgcta cgaggtgcgc 360
 tgcgtggaca gccctagcgg gtgcaagccc agcgcggcga cact 404

<210> 3902
 <211> 349
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-D7

 <400> 3902

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 cccgcgtgtt gcgttgattc ctccggtcga accaacgcgc ggccgggggt cccggtcgcg 120
 gccatggcgc ggctgccgcc caagatcccc accgtagcgc cggcgtggcc ggagttcggg 180
 ggccggcacc aacagcagcg cagcccctcc gtgggcacgt tctcgcgcgc cgcgcccatg 240
 cagccgtcgt ggggtggacga gttcctcgac ttctccgcgc ccaagcgcgg cgcgcaccgc 300
 cgctccgtca gcgactccgt ggccttcctc gagcccgaac ccggccccg 349

<210> 3903
 <211> 422
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-D8

 <400> 3903

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aggcctcgcc ttctcgcggc ggtgctccct cctcttcgt cccccagcga cgcaggcagg 120
 cgcgcgcgcg gccatgaagg ggggcgggtgc catgaggccg tcgcctatgt tctacgtcca 180
 cgaggcggac gtcgtccaga tccaccactt cctcgaggag tgctccctct gcgccaaatc 240
 gctctccggc gacatcttca tgtacagggg tgacacgccg ttctgcagcg aggagtgcag 300
 ggagcagcag atcgagggtg acagggcgaa gcaccggcgg aagaagcgcg cggcggcgca 360
 cgcgctgtcc gcacgcagca gggagcaccg ggcacagcag cagctgcaac aacaacaaca 420
 ac 422

<210> 3904
 <211> 379
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-031-Q1-E1-D9
 <400> 3904

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 tcaaatgatc ttctgcaagg gacattttca gaagtttctg gatagagcag agagggctta 180
 caggagattt gtaagggtaa gactctccgt atctgagcgg aatgggagat ctagcatgtc 240
 cagggtgtgt gtctgtggtg taagagcttc ctcatctcag ctttaccgca acaagttcat 300
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<210> 3905
 <211> 409
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-031-Q1-E1-E11
 <400> 3905

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ctcatggaga aggaccacaa cggcaacctc acgctggagg agctcatgga cggcctccac 180
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gacggcaacg gcaccctgga ctgcgacgag ttcgtgacgg tgtccctgca cctcaagaag 300
atgagcaacg acgagtacct ggcgtcggcg ttcagggtact tcgacaagga cggcagcggc 360
ttcatcgagc ccgangagct gcnggatgaa ctgggccccca acgaacaag 409

<210> 3906
<211> 396
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E12

<400> 3906

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gattcctact acgaggtacg gtcagattgg gcggacgggtg tgcccaagat caagttcaag 180
atcaaggctg gcaaaacatt aagtgtcgg aaatggcaag ctgcatttag tcccgatggc 240
tgtcttgata ttgcctcagt cctaagccgg atacacagag gaagtgtcca tccgacagtc 300
agaggagagg tctgggaatt cttacttggg tgtttcgatc ccagaagtac ctttcatgaa 360
agggaagaga tacgcaaata cggaggatac aatatg 396

<210> 3907
<211> 366
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E5

<400> 3907

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cggccacgcc aagccccgga cgcgtggcgg gcgtgtggta caccacaacc acggcaagtt 180
cacggccggg ccgtggaaac ccgccacgc gaccttctac ggggggcggg acgggtccgg 240
caccacggcg ggcgcgtgcg ggtacaagga cacgcgcacg caggggtacg gcgtgcagac 300

ggtggccgtg agcacggtgc tgttcggtga cggcacggcc tgcggcgggt gctacgaagt 360
gcggtg 366

<210> 3908
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E6

<400> 3908

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tgtgttccac atgcaaggcc agagtacaca accgttgccc tacctgcagg caagagctgg 120
gcgacatcag gtgcctggcg ctggagaaag tgcgccagtc tctggagctc ccctgcagggt 180
actactcgct ggggtgcccc gagatcatgc cttactacag caagataaag cactaggcgc 240
agtgcggcct gagaccgtac aactgcccct acgccggctc cgagtgcggc gcggccggcg 300
acatcccttc cctcgtctcc cacctgaggg acgaccacaa cgtggacatg cacagcggct 360
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aa 422

<210> 3909
<211> 351
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-E7

<400> 3909

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ctctagcttt tgctcgggtg tctggagaca gagcgagaga gagagagaga gagagaggta 180
gacggagatg gagtgcctgc tggggctgct caagggtcgg gtggtgcgag gagtgcacct 240
ggcaatctgc gaccgcgtca cccacagcag cgaccctac gtcgtcctcc gccacggaaa 300
gcagaaagtg aaatcaagta taaaataccg cacgatcaac ccagaatgga a 351

<210> 3910

<211> 379
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-031-Q1-E1-E8

 <400> 3910

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gcagatcatc gagctgtgcc ggatgagcaa ggatgccgag aagaagatcc atgccctcat 120
cgacggctac gccgaccgcg ggggcccgtc cctgggctgt tcgtaccagc tgggtccccga 180
gaagagcaag gagagcgccg gcgagccgtg gcagttcatc ggtctcctcc cgctgttcga 240
cccgccgchg caccgacagcg cggagaccat ccgccgchg ctccacctgg gcgtgaacgt 300
gaagatgatc accggcgacc agctggccat cggcaatgag acggcgcggc gcctgngcat 360
gggcagcaac atgtaccgg                                     379
  
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<210> 3911
 <211> 257
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-E9

 <400> 3911

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caccggggat tgggttcaat tggcggtcga aaaacaccgt ctttaatcgg gaaaatactc 120
ttcgtaaca tatttaatca cttttcaaca cgacccccct tcaacagcta gcgtcataat 180
tttaaagccc gcacctatca aacttcccag cattttctca gtctgactct tcaaagtgat 240
gccccctttc acagcct                                     257
  
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<210> 3912
 <211> 136
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-F6

 <400> 3912

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tttttttttt aatttttcttt tttttttttt tttttttttt tctatatattca ttggggttggg 120
 gccatttcca cccttt 136

<210> 3913
 <211> 388
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F8

<400> 3913

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 ggcttcttgc ttggctctac tatcttcatg ctatggaaca aacactatag gcatgggccc 120
 tcggtaggag cgtttgagat gagaactcct cctcgaagaa gaaccgtgga acagctctta 180
 gctctgcaac aggccatctc gcagctggaa gcgcacgtgc aagcaggaaa catttttctc 240
 ctgaagctcc ggtccctcat gcttgcagcg tttcctcaga gcaccaacag agttgcagct 300
 gcaactgggtg ctgtgggtgc gatattcacg ttcgtgccct tgaggaccat cgttctacta 360
 atccttctag aagaatacac aagacaga 388

<210> 3914
 <211> 377
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-F9

<400> 3914

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 gagggtagcc accatgggtg aatcacgtgt acgacgccat agagacctca atgattgggtc 120
 taggtgcttc gccatcatgt atagagcgtg agcgcggagt tggtgggggc ggatcaaccg 180
 aaacaccatg gattcttcgc cggagtctga tcctcacgcg cgagccgcta tttgctatgg 240
 agagccctcc cccacccgat ccattatgtg acgagcaagt gactgaggaa cccggagctc 300
 tgcagggtga agactttaag gaggagctcg cagaagaaca tgaagaacca tctgggaaaa 360
 cagtgtacc acaaggg 377

<210> 3915
 <211> 413
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-G11

 <400> 3915

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 tgacgaacgt ccagatccgc ggcggcacgc ggctcaacag caagttcaaa aacctcaaca 180
 tcttcgagtg caagaacgtg ctgatcgaca aagtgcggt caaggcccc ggcgacagcc 240
 ccaacacgga cggcatccac atcggcgact ccagcaacgt gaccatcagc agcaccacca 300
 tcggcggtccg cgacgactgc atctccatcg gccccgggag caagatgac cgcattccatg 360
 gcgtcaagtg cggcccatgc caccgcatca gcctcggcag cctggggccc etc 413

<210> 3916
 <211> 352
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-G6

 <400> 3916

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 cgcctcgggg ccggcgccgt gttggcgctc ctagtggcgg tcgccgcggt ggccgcgttc 180
 ctgcggtg cggcctcggc gaagtccggg gagctgagcg cgatgggggt gctggcgggc 240
 aagggcgcca gcggcgcggg cccgcagaac tgctcgggcg cgggtgggcga gtgcgacgtg 300
 gacgatgcgg aggagctcgg gctgagcggc ggcggcctcg gctccgacta cg 352

<210> 3917
 <211> 359
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-031-Q1-E1-H7

 <400> 3917

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tcgatgcgaa ggcgtccggg cctgggtgggt ccttcgacat caccaagttg ggcgcctccg 180
gcaatggcaa gacagacagc acgaaggctg tgcaggagggc atgggcatcg gcggtcggcg 240
gcactgggaa gcagacaatc ctcatacca agggcgactt ccttgctgga caactcaact 300
tcacaggccc ttgcaagggc gacgtgacca tccagggtga tggcaatctg ctggcgaac 359

<210> 3918
<211> 410
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H8

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tcgctaggca gcggcaggcg ataaccgacg gccttagaga gaacatcctg aacttctcac 180
actcgggtgtc gggcaccagc gcgaaggagg tcatggacct gatcatggtc acgcagtact 240
tcgacaccat caaggagctc ggggacggct ccaagaacac cacgatcttc ataccacag 300
gaccaggcca cgtgaaggac atcagcgagc agatccgcga cggcatgatg caggcctcaa 360
gcagcaacgt gtaaatacacc gactctctgc acgattggag acggctcggc 410

<210> 3919
<211> 383
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-031-Q1-E1-H9

<400> 3919
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tgatcgacca gatcaagcg gagatctccg tcatgcgcct cgtccgccac cccaacgtcg 120
tgcagctgca cgaggatgat gccagcaaga gcaagatata ctctgccatg gactacgtcc 180
ggggcggcga gctcttcgcc cgcgtcgcgc gcggccggct caaggaggac gccgcgagaa 240

ggctacttcca ccagctcgtc ggcgcgcgtc acttctgcca cagccgcggc gtctaccacc 300
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<210> 3920
 <211> 408
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-032-Q1-E1-A11
 <400> 3920

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 gccgacgccg acgcggaccc ggcgcgcgaca cgatccggtg gatcaagtgc atcacacctt 180
 tagggaggcc ccttgacag cagtttgtgc tgcaaattct atatagctct gtcgcagcat 240
 ggctcgggtg ggcgtggcac gctcttcttt gggatttcag aatggcaciaa gttctagcag 300
 tgaccagat cgtcttccca acgagttggg cagtatgagc ataaaggacg acaaggacgt 360
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<210> 3921
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 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-032-Q1-E1-A12
 <400> 3921

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 cgtgccctac agctggatcat gagcgccgc ccaaccatgg cggcggcggc gcccggtgcgc 120
 gcctgggtgg tggcgctggc gctgggtgtg gcgtgcgcgc tgctccagcc gcggccgtcc 180
 gacgccgcgg cgcagccgc cccgcagtcg ccggcgacgg cgggtgtcgtc gggcgccgcc 240
 aagcccaagt gcgtggccgg cgcaggaac gaccacgcgt gccgcgtcgg gcccggtgcac 300
 gacccgggca gccaggagga tgagggtcc agcgtcacca tcgacgcgca cggcggccgc 360

gccccgacgac gtcggccacg acgaccggag cgactacaac gacccccgacg tgcccaac 418

<210> 3922

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A4

<400> 3922

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gaagatagcg ccgtcgatgc tctcgtcgga ctttgccaac ctgcgttcgg aggctgagcg 180

catggtccgc ctaggcgccg actggctaca tatggacatc atggatgggc acttcgttcc 240

taacctgact attggggctc cggatgatcca gagcttgagg aaacatacca aagcatattt 300

ggactgccat cttatggtca caaagccttc agattacgta gaaccatttg gaaaggctgg 360

cgcttctgga ttcacattcc atatagaagt tgctagagac aactggcaag atctcatcca 420

aagcattaaa tcaaagggtg 440

<210> 3923

<211> 194

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A5

<400> 3923

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caactacat gacgtcactc gacacttata tgacgaatga ttcagtagcg gttggaacgg 120

ttgtatgctc ctgaaggact ggctcgctgt cgtcgaccaa gaaacagaat catcagccag 180

acgattcagg ctgc 194

<210> 3924

<211> 388

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A6

<400> 3924

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cgtgttcggc gccgcgcccg tggaggtctc cgtgaagggt gccggcatcc actggcacta 120

ctgcagccgg tcccacgccc cggagctcac cgcgggctac tacaacacgc gccgccacga 180

cggttacctc accatcgccg gcctcctggc gcgccacggc tccgtgctca acttcacctg 240

cgtggagatg cgggaccacg agcagccgca ggaagcgccg tgcattgccg aggcgctggc 300

ccggcagggt gccgcgccgg cgcgcgccgc cggggtgggc ctgcggggcg agaacgcgct 360

gccgcgttac gacggcacgg cgcacgac 388

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<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-A7

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gagtcgccc cggcgacgt ccagagaag gattcgctcc ccaacggctt caccctggtc 180

gggctcagaa ccatcgacat cgccaagtcc accgtagagg gcatgtgcc cggcaaggct 240

tcgtgcgcag acatcctggc cttcgcggcg cgcgacgcg ccgtggccgc gggcctcgcg 300

agatacgatg tcgcggcggg gcgccgcgac ggcattgcgt cgaacatgga cgacctcccg 360

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gg 422

<210> 3926

<211> 438

<212> DNA

<213> Zea mays

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cgatgcgggc acatgttgcg atggctgtgg cgttggtggt cttggtgagc ggcgcatggt 120
gcggtcctcc caaagtcccc ccaggcaaga acatcacggc cacctatggc aaggactggt 180
tggaacgctaa agcgacatgg tatggcaagc cgacgggtgc cggccccgac gacaacgggtg 240
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acatccccat cttcaaggat ggtctgggtt gtgggtcctg cttcgagatc aagtgcgata 360
agcctgtgga gtgctccggc aagcccgtgg tggcgcacat cacggacatg aactatgagc 420
ctatcgcggc gtaccact 438

<210> 3927
<211> 393
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-032-Q1-E1-B10
<400> 3927

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cccctcgccg cggtagagcca agccggcgca cgtcgccccg gggctcacgc tcaccaccga 180
gccccaacca attaataata tatatatata gctaggatcg atcgtcagta aaatggcagg 240
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caccgccgag gcgacgccga ccgacgccgc catcgacgag gcgtacgcgc atctcgtcaa 360
cctcaccgct aaccaggagt actgggcgga gcg 393

<210> 3928
<211> 409
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-032-Q1-E1-B11
<400> 3928

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aggagaaaa aatggcactg gccattgag gaagcttgag aaccagttaa caagaattgc 180

caacatattc ttggacaatc ttgttaacag agttttaagg tttcccagca gacatttttc 240
gagtccagga agagcgcggtg caaccaccac attcatataa ttaataagca aggttttagag 300
aagaggcaac atgggcacaa agatgaagaa ggggatcctg aagccgttcc gctatatctc 360
aaccatcatg gatggtaagg aggctgaaat gcaaattggg ttcccgaag 409

<210> 3929
<211> 392
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B12

<400> 3929

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gccggagggc ccaatcctat gcatcaataa ctgtggtttc tttggaagcg ctgccaccat 180
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tgcaactgta ggtgtggcag ttcctcaagt cgaggagaag actatcgccg tgcagcctat 360
gcatgtcgtc gaaaccagcg aggctgctgc tg 392

<210> 3930
<211> 67
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B2

<400> 3930

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acaaaac 67

<210> 3931
<211> 444
<212> DNA
<213> Zea mays

<223> unsure at all n locations
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<400> 3931

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ctcgtcgggtt actgcgccga gggcgagcag cgcctgctcg tctacgagta catggcacta 240

gggtccctcg aggaccacct gttattgctg cgtgacgatg gccatggcag ccctttgccc 300

tggcgcacga ggatgaagat cgcgctcggc gcggcgcggg gcttagagta cctgcacgaa 360

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cccaagctct ctgacttcgg cctc 444

<210> 3932

<211> 239

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B5

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ggatccctca catggcagga ccttaaagct ggcactgagg aagatgtcta cgtatccgat 120

tagtgacaag gagtatgctt acctcggcac acattctgtg cagatcatac acgacggagt 180

tcgtctcata tttccactat tgtcgtctcc tgcaatttgt atacatgcc a gattactct 239

<210> 3933

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B6

<400> 3933

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gtttctttgc ggtatggctg gttctctgtg gtttctcttc tgaatgtgct ggtgcgggtga 180

tgttgttttg atttgtgttc gctttggcgg atctggctgc gcacagagtg gccggagaag 240

atgatgggcg ggttcctctc cagggtcctc ctgctggctt ttggctatgc ctatcctgcc 300
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<210> 3934

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B7

<400> 3934

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 aagaaacaaa agtatgataa aattagtga aagaaaatgc ttacctcggc agagattctg 180
 tgcaaactctt acccgccgga gttcgtctca tatttccact attgtcgctc cctgcgattt 240
 gaagacaggc cagattactc ttcaatgaag aagctctttc gtgatgtatt tatacgggaa 300
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 aacaacaagc ttgttcaaca gaccaagtgc aagaatggct ggag 404

<210> 3935

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-B8

<400> 3935

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 gaggagatca agacggagct ggagaagaag tgcccgaacg tgggtgtcgtg cgcggacatc 180
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 ctgggacggc gcgactcgtc cgtgtccaac cgcgaggacg ccgacaacct gccgggcccc 300
 gacatcgagg tgcccaagct catcgacgag ttcgacaagc agggcttcaa cgtcaggag 360
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<210> 3936
 <211> 407
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-032-Q1-E1-C10

<400> 3936

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 ttggtgcggc gccggccgcc gcgaacgcgc cgggcggggc gttcagcaac tgggtggcga 180
 tgaaccagca gagctacgcg ctgtacgcgc agaagtccgt cggggacggg ggcaaggagc 240
 ccctggacaa gaagctgtcg gaggcggaga agaagaaggt cacgtacngt ggtggacca 300
 gcggcaaggc cgactacacc aacatcaccg cggcgctgga ggatatcccg gtgagcaaca 360
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<210> 3937
 <211> 445
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-032-Q1-E1-C12

<400> 3937

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 ggcggccgtg gccgcgctgc tgctggtcgc agcgggtgtc cctgcgcgc gcgcggcggc 180
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 cgcgtgcgag gcgacggggg tacagaagat cgtcatcccg ccgggcaact acctgacggg 360
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<210> 3938

<211> 410
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-032-Q1-E1-C2

 <400> 3938

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 tgggagggag agcctcaagg cgggtgatca tatctactcc tggagggcgg cgtgggtcta 180
 cgcgcatcac ggaatatatg tgggcgatga taaggatgac catttcacaa gaggaagagg 240
 acangaggtc ggaacaggaa ctgtcgtcga tattattctt gtgagttcac cccaaaacga 300
 agcaacacgc cttgcccggg gtgcaccgac gaaaccagcg acagcagcac agagacgaac 360
 ggcgtggtat cctcctgtct cagctgcttc ctaactgggg gtgctctcta 410

<210> 3939
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 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-032-Q1-E1-C4

 <400> 3939

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 cgcgctggg tgggtggcgt ggcgctggtg ctggcggtgc cgctgctcca gccgcggccg 180
 tccgacgccg cggcgcagcc cgccccgcag tcgccggcga cggcggtgtc gtcggggcgc 240
 gccaaagcca agtgcggtggc cggcgccagg aacgaccacg cgtgccgcgt cggcgccgtg 300
 cacgaccgga acagccagga ggaggagggc tccagcgtca ccatcgacgc gcccgccgcc 360
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 aacgaacagc tcgt 434

<210> 3940
 <211> 107
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C5

<400> 3940

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tcacacttca ggtcgccgcc aatcccgcga tgcataagg tcacacc 107

<210> 3941

<211> 406

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C6

<400> 3941

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gcctcgccct tctttccagg gtgcggcgcg ccggccgctc ctaagaacgg ccttggagag 180

cgcccagaga gcctggacgt ccggggcggt gcggcggaagc cgggagcctc gtctaatagcc 240

gtgagggcg gcaagacgcg cgcccacgct gccgtcccca aggtgaacgg tggcaagtct 300

gcggtggcg atgtggaaca cgagaccgta actgtacctt cgtagtgcc gaggactttc 360

tacaaccagc ttcccgactg gagcatgctc cttgctgcca tcacga 406

<210> 3942

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C7

<400> 3942

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tcgcagtga ggcggcgggc gtggccgcgc tgctgctggt cgcagcgggtg tcgcctgccg 120

cgcgcgcggc ggcggtggcg gtggcgggag ggcgcgctc ggtgccggcg ggtccgctgg 180

acatcgcgca gctggggcgc aagggcgacg gcaagtcgga cagcaccgcc atgatactca 240

aggcgtggaa gaacgcgtgc gagggcgacg ggtacagaa gatcgatc cgcggggca 300

actacctgac ggcggggctg gagctgaagg gccctgcaa gtcctccatc atcatccgtc 360

tcgacggcaa cctgctcggc accggcgacc tcagcgcgta gcagaggaac tgga 414

<210> 3943
<211> 427
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C8

<400> 3943

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ccgacgtacc accgccaccg caggagcgag atggagatga agaggatcct cttcgccgtc 180
ctcgtcgtca tcgccgcctc ggccaccgca gtgctggcct ccaccgagggc cgccgccgcg 240
ggcgccccaa ctgcctccga gtcgtccgcc gaggtcccg ctggcgctgg cgctggcgct 300
gccgctggcg ccgcgcgcgc gggggccctcc gccagcagcg gcgcgcgcgc cctcgccgcc 360
gcgcccgcgc cgctcctctt ctccctcctc gcctactacc tccactaagc gtgtgctgtc 420
ttacgta 427

<210> 3944
<211> 401
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-C9

<400> 3944

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cgacgccgtc ctttctcctt agtgcccagc ttatttgcag atccagccct ctgatcctcg 180
tcttctttca cctctccaac atgaaggta acaccaagat caagctggag ccggtcatgg 240
cgccgtcgtc gtccctgccg cggagcgcca gcgagctacc cgacccgccg tcaccgttca 300
gctccaacac ggcgccaccac cccgtctccg tgcccaccac acctaggttg tccttatcgt 360
gctcgtcgtt cggccacatg gtgaccccg ccaccgacac a 401

<210> 3945
 <211> 438
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-032-Q1-E1-D1

<400> 3945

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ttcctaacca ccataacctg cagcatggcc cgctgcca ccagcagcgg catggcagca 180
ctgctcctcc tcgtcgctt cgctgctctc nctccgcg cctgtctctc ctgctctcg 240
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ccggaagacg agaacaagga gaaagagcgg cagctggcca aggagaatgc gtacgcggcg 360
gagaaggctg tccagcatga gatgctcaag tacgccaagg agaaaggctt ggtgtccccg 420
tacaacggca acgggtgg                                     438
  
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<210> 3946
 <211> 380
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D10

<400> 3946

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gtagcgcggg aaatgccggc ggcggcggcc atgacgacga ggcgggtggt gctggaggtg 180
ctacggctcg cctcccgcca cgcttccag gtggccttct ccttcgcggc gaggccgcc 240
gtgtccacca tgctcaagcc ggccatcacc aagcccctct accaccacca ccacgacaac 300
gactaatctg gcgcagatct acagcacggc cgtcggcatg ccttcacact ttcacagccc 360
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<210> 3947
 <211> 402
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D11

<400> 3947

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aagacttgat ttagttatgg acggattggg aggcctcttg aaagtctgcg tgggtccgggg 180

tatcaacctt gcctaccgcg acgcaagagg cagcgatccg tatgtcgtcc tacggcttgg 240

caagaagaaa ctgaagacaa gcggtgaagaa gagatccgtg aaccccatat ggcaagagga 300

gctaactctg accgtcacag atcccagcca accactgaag ctggaggtgt tcgacaagga 360

caccttcagc agagacgacc ccatgggaga cgcggaagtg ga 402

<210> 3948

<211> 409

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-032-Q1-E1-D3

<400> 3948

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gacgcctggc gggcgtgtgg tacacgacaa ccacggcaag ttcacggccg ggccgtggaa 180

acccgcccac gcgaacttct acggcgggcg ggacgggtcc ggcaccacgg cgggcgcgtg 240

cgggtacaag gacacgcgca cgcaggggta cggcgtgcag acggtggccc gtgagcacgg 300

tgctgttcgg tgacggcacg gcctgcggcg ggtgctacga ggtgcggtgc gtggacagcc 360

ctagcgggtg caagccccgac gcggcggcac tggtggtgac ggtgaccga 409

<210> 3949

<211> 365

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A7

<400> 3949

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 catcctcccc acgtctgtct ccgtcaccga caagaaactc ggcgtcctca actacaccag 180
 ggccgacgac gggcagatgt acttcggcgc tcccggagcc ccttgcgtgg ccaagctcgt 240
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 caaga 365

<210> 3950
 <211> 341
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-A8

<400> 3950

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 aactacacca gggccgacga cgggcagatg tacttcgtcg ctcccggagc gccctgcgtg 240
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<210> 3951
 <211> 408
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-B12

<400> 3951

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gcgacaccta cgacgacttc accgggtcca tgcccagagag cgagtgccgc tacgccgtct 300
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 ggtcnccgga cacctcgagg gtcaggagca agatgctgta cgcgagct 408

<210> 3952
 <211> 448
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B6

<400> 3952

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<210> 3953
 <211> 137
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-B7

<400> 3953

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 aaaaaaaaaa ataaaaaaga aaaaaaaaca aaaaagtaaa aagggaggcc gcccaagagg 120
 tctaaatctt acttcgc 137

<210> 3954
 <211> 412
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C6

<400> 3954

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ccagatcgcg ttggagtcgg tgcgtggaga gaagaacggg ctcggtggcc gtattcgctc 180
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<210> 3955

<211> 178

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C7

<400> 3955

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gaccatagat tgctccatag acaacagagc tcgtgtgaca tgggctacac cgaggctt 178

<210> 3956

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-C9

<400> 3956

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cccaacatca ccaccaacta caacggcaag tggctcaccg ccagggccac ctggtacggt 180
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ggctgcggt catgctacca agttagatgc aaggaaaaag cttgatgctc gggcaatcca 360
 gtcacgggtg acatcactga catgaactac gaagcttatc gcgccctacc aattcgactt 420
 tagcggcaag gc 432

<210> 3957
 <211> 328
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-025-Q1-E1-D11
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 gtctatcgat gcgactgcgc cgaaagcttc aacgagttca acgccaacaa tatcacggag 300
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<210> 3958
 <211> 92
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-025-Q1-E1-D12
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<210> 3959
 <211> 427
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-D2
 <400> 3959

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 cgtcgtcatc cagtccgacg agganganga cgagaggag atggggagcc acagaactaa 240
 gatgtcttgc tgcggtggcg ccgaggagga cagctacggc ccgccggcca accaggcggt 300
 tccaccaccc aatgccaacg cccccggcaa cagaggcggg ccgagaggac cgggggcgcc 360
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 agtcaa 427

<210> 3960
 <211> 413
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-D3

 <400> 3960

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 aaccaatgaa caaaaagaag cttggttcca agcccccaa ggaaccaacc tccgcatcaa 180
 taactgtggc ttcttcggca gcgcggcgac catgaacatg tgctccaagt gccacaagga 240
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 cggcagcgac gccgtcatgg agccggttgt tgctggcagc aacacggtag tagctgttgc 360
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<210> 3961
 <211> 447
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-D4

 <400> 3961

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 aggccccgct caagtacccc ctttgcaccc gctttgctgt caagtccggt ggctaccgca 360
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<210> 3962

<211> 265

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-D6

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 tcggcagagg gcacttcggc gagggcggcct cgcacgaga gttgtcacgg agtgcgacga 180
 tgaggatgag gagacggata gggggagtca cgctcgtagg atgtcaggcg gcggtggcgc 240
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<210> 3963

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E1

<400> 3963

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 ctctccacc ccggaggccg ttagcctgct ctgcactgcc aaggteccat gcaccggcgt 120
 caccatggat gacgtcaacg tcgagtatag cggcaccaac aacaagacca tggctatatg 180
 cacgaacgcc aagggcagca ccaagggttg cctcaaggag cttgcatgct tctagaccct 240
 ccgtcgactg acccatctct ctagttataa tttttctctc gtccttgcat tgcccattac 300

atgctatcca ttggtaacgc acaacagtaa aatgacagac atccgacagc tatattaggt 360
 tcgacggtgt aacaccctga atttgagggt ataaaatttt ttctctaaat acaacaaaaa 420
 tcaggtgtaa cctct 435

<210> 3964
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E10

<400> 3964

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 aagatcggcg agggcgggcta cgcccccgtc taccgcgcct ccctggacca ccccccgtc 120
 gccatcaagg tgctccggcc cgacgcgcac caggggagga agcagttcca gcaggaggtg 180
 gaggtgctca gctgcatccg ccacccaac atggtgctcc tcctcggcgc gtgccccgag 240
 tacggctgcc tcgtgtacga gtacatggag cacggcagcc tcgaggaccg gctgttccgt 300
 cggggcggca cgccgccgat cccgtgggcg cagcggttcc ggatcgcggc ggagatcgcg 360
 acggcgctgc tgttcctgca ccagacaaag ccggagccgc tgggtgcaccg ggacctgaag 420
 ccgggca 427

<210> 3965
 <211> 389
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-E3

<400> 3965

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 ctgcgcacac tccttgtagc agggcctgta cgcccgagc gtggcgagc ccgcgcatccg 120
 ccccgcgctc cgctgctga agcagaacct gtcgttctg gtgtccgtgc tcgaggaccg 180
 cgcgcagccc gtggcggtgc gggaggtgat gcgcgcctcc ttcgaggcgt tcctgatggt 240
 gtccttggcg ggcggcaacg agcggagctt cgtgcgcgcc gaccacgcca cgggtggagga 300

ggacttccgg agcctgagggc ggccttctc cacgtgcggn gaagggctgg tccccgagga 360
cgtgggtggcg cgggagggcag agacggccg 389

<210> 3966
<211> 383
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E5

<400> 3966

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cgatgtggcg caggctgtca tggaatgcaa catggacacc gagcgattcc ttggggcatt 120
catggtctcc gccaaactgcc ccaacgtgtg cctcggtgaa ggcttctcct gcggcatgtg 180
catcaccttc cacagcagct gcatctgcac taagccgtgc tacattaact gactcccggc 240
agttcgatgg tggacgttta ttctagttac tggcatacgt gattttttcc ccactaacag 300
tcacacgacg cacgtgctgg catgtacgtt gtgtagtaca tgcattgtctt gctggcttca 360
gttgctgact agtgatgagt tgt 383

<210> 3967
<211> 395
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-E6

<400> 3967

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gggactcgca gcaccactgg ggcgtgcgcg gggagagcga cggcgacggc gtctccgtga 120
tggggtccag cgatatctgg atcgaccacc tgtccatgag cagctgcgcg gacgggctgg 180
tggacgcggt ggacggctcc accgccatca ccgtctcaa cggccacttc acgaggcacg 240
accacgttat gctgttcggg gccagcgacg ccgctgcaa ggacagggag atgcaggatca 300
ccgtcgctt caaccacttc ggcaaggggc tgggtgcagcg gatgccgcgc tgccgtcacg 360
gcttcttcca cgtggtgaac aacgactaca cgcac 395

<210> 3968

<211> 309
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-F1

 <400> 3968

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 acaacacaac cgttccatta ttaaaccaac actgacacga acagcagata cttcgacaac 120
 ctccatatgg agagggcacc agacgacgca ggcacatcgg cagcttaaac gacccatgac 180
 ttactgacca ccnacggaga cggagcacia agtggagggt gctctccttt tgggattttg 240
 tagcctgccg ggtgcgggc atcctccaac tgtttgccgg cgaggatcag acgctgctgg 300
 tccggggggg 309

<210> 3969
 <211> 430
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-F1

 <400> 3969

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 ggtcctcgac aacgaagctc tctacgacat ctgcttccgc actctgaagc ttgctacacc 120
 cacttttggg gacctgaacc atctcatctc tgcaaccatg agtgggtgta cctgctgcct 180
 gcggttccca ggccagctga actcggacct tcggaagctt gcggtcaacc tgatccccctt 240
 cncccgctc cattttctca tggtcgggctt cgcgccgctg acgtcaaggg ggtcncagca 300
 gtaccgcgcc ctgaccgtcn cggagctgac ccagcagatg tgggacgcga agaacatgat 360
 gtgcgcggcc gacccgcggc acgggcgcta cctgacggcg tcggccatgt tccgcgggaa 420
 gatgagcacc 430

<210> 3970
 <211> 450
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-025-Q1-E1-F4

<400> 3970

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gcccccgcg cgtgcccgtg cgtgccaggg acgacgccgg gcggccgatg gagttcacgt 120
cgtcctactt ccacgccttc ggcaaccccc acctcgcggc ggtgggtctcc ggcgacggcg 180
gcagcgcgca ggcccaccgg ccgcgccgct ccaccgacgg cgccaaggcg gaggacggca 240
ggagccccac caccacaacg gcgaggcgcg cgccgtccat gttctgcgtc cccgacacgg 300
aggcggagga gcccaacggc ttcttgagc agtgcaccct ctgccgaag gcgctctgcg 360
gcgacatctt catgtacaga ggggacacgc cattctgcan ccgacaatgc aggagggagc 420
agatcgacat gggacgcata aggcaccggg 450

<210> 3971

<211> 411

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-025-Q1-E1-F5

<400> 3971

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cgtggattct tgagagtgc cggattacta tttttgagaa tcatgagctg gccagcattg 120
tgctggatta caaaaggagg tgtgtccgcg atagtgtgct gcagtcacac acctctgtcc 180
atgaggattg caacattgag tctggagaaa caaccttgca ctgtgagcat gtgctgagcc 240
ttgaatcagg tccgaccata gtgaaggccc ggaccatgtg gaggcctaag ggaaccaagg 300
cccaaganac accggttcca tcttcattct gatttttgtc agatgttcga gatggtgact 360
ttggcagcaa actatctggc agaagatcag aatggttact agcatcctct a 411

<210> 3972

<211> 391

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F6

<400> 3972

ttcgcggggtc gacccacgca tccgcaagca cctcctcttc ccccgccggg caacaactca 60

gccgccgcaa ccgccacatc agccatgggc gctgcgcaa ccaagcccaa gacgcttgag 120

gggcaggccc cagctgagggc cgccgtctcc acaccaagg ttgcgcccga ggccactcca 180

atctccgttg aggttgcggc tgatgaacag gtagctgaga aggtgggtgg ggaggagccg 240

gctgcgggcg ccgacgttga gcatcagaag gctaattgagg tgctcgctcc agaggcgggc 300

gtcgccgagc ccgaccacaa ggaggaggaa gccgtggaga agaccgtcgt cgaggaggag 360

aagccagcgg cagcagccca tgcagaggaa a 391

<210> 3973

<211> 418

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F7

<400> 3973

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gctccaatgg ctgttctttc tgctgctgat gcttccccgg tctcagctat cgggtttgag 120

ggctatgaga agcgcccttga gatcacattc tctgaggcac ctgtctttgt ggaccctcat 180

gggcgtgggtt tgcgtgccct ctccagggcc cagattgact ctgttctgga tcttgcacgg 240

tgcacaattg tgtctgagct ctccaacaag gatttcgact catatgtcct ttctgagtca 300

agcttggtta tctatcctct gaagattgtc atcaagacct gtggcactac caagctcctg 360

ctcaccattc caagaatcct tgagcttgct gaagagctgt ctatgccact tgctgctg 418

<210> 3974

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F8

<400> 3974

cgcggggtcga cccacgcgtc cagcatcgat cagacaaga tggcgtgcac aaacaatgcg 60

atgagagcct tgttctcctt ggtcctcttc tgcacgtgc atggtgagaa ggaagagtca 120

aagggcatcg atgcgaaagc gtccgggcct ggtgggtcct tcgacatcac caagttgggc 180
gcctccggca atggcaagac agacagcacg aaggctgtgc aggagggcatg ggcacggcg 240
tgccggcgca ctgggaagca gacaatcctc atacccaagg gtgacttcct tgtcggacaa 300
ctcaacttca caggcccttg caagggcgac gtgaccatcc aggtggatgg caatctgctg 360
gcgaccacgg acctaagcca 380

<210> 3975
<211> 434
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-F9

<400> 3975

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cttctgctcg acgctgtgcg agggcaagaa ggggacggac ctggctgtgt gcaaggagtc 120
ctgcgcgctc tcccagcagt ccaacctggt gctgtacggc aggatccagt gcaagggcaa 180
atgcaccgag cagaagggca tcacggcgcc ggccatgaag gtctgccagg aggagtgcga 240
caaggcgtac gtggtgaagg cggccgaggt caccaaggcc tgcagcgtca cctgcgccaa 300
ggagaagaac ccgcgcctca gcgagaactg caagagggtcc tgcacccctc ctctttcttg 360
aagcgaagcc cttgaaatg aatgaaccat gcatgcatgc atgcatgtat gcatgcgccg 420
gggtgacgtg gcgt 434

<210> 3976
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G1

<400> 3976

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ttgcggttgc ttggcccaga tctgcggcgc attcggcggt tctgatctcg cgtgcacctc 120
gtttccctcg gcggtggatc agtggcggct tggtcgagat gggcgatgcg gttgatgaca 180
tcatctgtgc aacggatgcg gcggtcgccg tcgaggatgc ggccagtggg aagcccgcga 240

tgctctctag cttagggggg caggggtgagg aagagcatga ggagaaggac aatgaggaca 300
 agtcaggcga gagcgaggtg atcaacccgc cagaagacgc tggcggggaa ggcacctcac 360
 ccctggaagg gttgaagcct cgcctttcca aggggaatca aagccatggg cctaattgc 418

<210> 3977

<211> 430

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-G3

<400> 3977

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 ccctctcccg gtacttcagg gtgtccaaat cctacaacaa ggagggtccc aaaaattcca 120
 aggagtccat aatgaagttt tccaaggaca aaacaaaaaa ggtaaaaggg ttcacgtcag 180
 aatccactgt gagctacaga gatcggctga agatcatggc cggcctgggc aaaccggacg 240
 acctcaagct gggctctacc gaaaagaagc tcgtccaggc gtacaacgag aaaccagtcc 300
 tctcgcggcc ccagcacagc ttctacgaag gagaggacta cttgangtg gaccttgaca 360
 tccaccggtt cagctacatt gctaagaang ggctggactc gttcaaggca cgcctcaaga 420
 acggcatcct 430

<210> 3978

<211> 258

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-G5

<400> 3978

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 ctcggtcaca catctaataa cgaaaggtct cgcccttttc ctccgacatc cacagggggg 120
 aggggaaaac gactgcattc acccggcggc agtactggcc tcggttccgg ctccggcgac 180
 gacgaccgcc gctgtaatcc tactcctatg cgtcgtcctc tcaactgtcca ctgctgacga 240
 ccccaacctc tcagacta 258

<210> 3979
 <211> 220
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-H10

 <400> 3979

 actcactctc caatctcgcc agtctttttt taggcctctg gcaatctgcg aactttctta 60
 ttcatcttac tagtgtggat ctataattcc attcaaaata tatacatgat ctaaatttca 120
 tgccaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 180
 aaatgaaaga aaaaaaagga ggctcgctcaa aaggttcgat 220

<210> 3980
 <211> 419
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-025-Q1-E1-H11

 <400> 3980

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 tgcttcactc gaggtggacc tctccagcat tgagccaggg accacggtga ctgtgaagtg 120
 gcgtggaaaag ccagtcttca tcagacgccg gacggacgac gacatcaagc ttgccaacag 180
 tgtggatgtg gcatccctgc gccaccaga gcaggatgca gagcgtgtga agaatcccga 240
 gtggctggtg gtcattggcg tgtgactca cctcggctgc atcccactac cgaacgccgg 300
 agactttggc ggctggttct gccatgcca tggttccac tacgacatat ccgggaggat 360
 ccgcaagggc cctgcgcgt tcaacctcga ggtcncgacc tacagtttct tggaggaga 419

<210> 3981
 <211> 463
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-025-Q1-E1-H2

 <400> 3981

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accgggtgca agcccgacgc ggcggcactg gtggtgacgg tgaccgacct gtgcccgcgc 120
aacgaccagt ggtgcaagcc accgcgggag cacttcgacc tcagcatgcc cgcgttcctc 180
cagatcgcg c aagagaaggc cggcatcgtg ccgatctcct accgcagggg ggcggtgcgtg 240
aagcagggcg gcatccggta caccatcacc gggaacaagt acttcaacat ggtgacgac 300
accaatgtgg gcggcgctgg cgacatcgcg gcgggtgtcgg tgaaggggag caagcgcgtc 360
aagtggacgg agatgaagcg caactggggg caagtgtggc agaacgggga aggaactcac 420
ctgcaattcg ctgacgttcc ggggtgatgac cagcgaccac cgc 463

<210> 3982
<211> 52
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H4

<400> 3982

cacgccaaaa ttgggggggt attatttga gtatcagtat aatcttgggc gt 52

<210> 3983
<211> 276
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H6

<400> 3983

cacgcgaaag ttgcgacgag attattatga gtatcattaa aaacttggac gtacagaaac 60
aatagcagag tgagagattt ggatggatcc cccgcacgcg cccgcagacg tcgacctaat 120
ataatgaaca atgcgggggc ggccggaatc aatgaatcat cagtaacggg gtagaaatca 180
tgtcatgtca gggaaaaaac gaagcaccgg gacacacacg catgggcatg gggacaaatg 240
actgcgtggc gaggagctgc aatccacgga cgggga 276

<210> 3984
<211> 450
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-025-Q1-E1-H7

<400> 3984

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acaccatcca catcgacggc tacgccttct tcgccgtcgg catggggccc ggcaaattga 120

cggcagcgtc gcggagtacg tacaacctcc tggacacggt gagccggcac acgatccagg 180

tgtacccaag gtcgtggacg gcggtgatga tgacgttcga caacgcgggc atgtggagcg 240

tccgctccaa catctgggag aggcagtacc tcggcgagca gctgtacgtg agcgtcatct 300

cgccggagcg gtcgctcagg gacgagtaca acatgccgga gaccagcctc cgctgcgga 360

aggtcgtcgg cctgccgatg ccaccgtcct accgcgccgt ctagagcgtc gaccgatcgc 420

gcacggtgct gtacacaact aaaggagagc 450

<210> 3985

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-025-Q1-E1-H9

<400> 3985

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atcgggagcg taccgttgcc gctgacacgg gttaaccagt gttgagatcc gactgcagc 120

agagcttttg gtgacctac ttgctacttc cacttgcaact cgccggattg atgaagctcc 180

tgcatgcatt gcatgcggag tcttcaaggg gatttcagct ggcaactcatg cattcaagta 240

aaggctccaa ttcgagatac cgggtgcgttt caataagcag gttcaacagt atctttcggt 300

aaaaaaaaa gctctgcttt tcgggcggtt gctatgtcgc actgcacagt gtggcggtanc 360

gcagcgatgg caagctaatt cctaagaaaa aaacatacgt gcatatagaa aactgatat 420

tag 423

<210> 3986

<211> 247

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A1

<400> 3986

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 tggaggccgg tggcggaggc ggcgggggcg gctactccac cccgagcgag gcagcgccat 120
 ccacgcctgc cgttggggag acgacgaccc ctctgtcagg cggcgggttac tccacccta 180
 gcgaggcagc gccatccacg cctgccgctg aggagacgac gacgactcct tcgtcaggcg 240
 gcggggg 247

<210> 3987
 <211> 402
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-026-Q1-E1-A11
 <400> 3987

cccggtcga cccacgcgtc cgggtgaggtg gctgccgccg ccgccgccag cggacggcga 60
 gatacccttc ggacacgacg ccgtcgcctt gtccttcttc gtggcggtgtg tggccgccac 120
 cgtcgcgctc gcgtcgtcca tgtgctcggc atgcggtcgc aagccgaagg cggccacccg 180
 tgcagaccg gccgcttcgg accagtccac cgggacgggc tcgggctccg tctccggtgg 240
 cggcgggaagc caggaggcta gcgccgcgga ggcgaggag gaagtgggtga gactgtcacc 300
 ggagctggcg atgcacggcg ccatcgaccc ggtgacgctg ccgtcgtcga cgtcgaagcg 360
 gcgcctgtcc atcagcgtga gcaagaagct gagcatgaac at 402

<210> 3988
 <211> 380
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-026-Q1-E1-A12
 <400> 3988

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 tgatgccaca gctgcgtagc ctctcgcgc tggctctcgt ggccacggcc atagccgccg 120
 ctcccgcgct tgggtttgtc gtcaccggcc gcatctactg cgacaactgc cgcgccgggt 180
 tcgagacaaa cgtgtccac gccatccaag gcgcgacggt ggagatggag tgccgccact 240
 tcgagtcga gcaggtccac gacaaggcgg aggcgacgac gggccccggc ggctggtaca 300

ggatggagat cagcggcgac caccaggacg agatctgcga cgtgcgcctg ctcaagagcc 360
cgaggcggac tgcgccgaga 380

<210> 3989
<211> 106
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-026-Q1-E1-A2

<400> 3989

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cgctgcgcgg tggcgattct actcgtagcc agggatcggg atccac 106

<210> 3990
<211> 334
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A6

<400> 3990

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cagcgcagcg caggtgtgaa ggaaggggga cgcgaggaa gatggggctc gcgttcggga 120
agctcttcag ccggctcttc gccagaagg agatgcggat cctcatggtc ggctcgcagc 180
ccgccggtaa aaccaccatc ctctacaagc tcaagctcgg cgagatcgtc accaccatcc 240
ccaccatcgg tttcaatgtt gaaactgttg agtacaagaa cattagcttc actgtctggg 300
atgtcggggg tcaggacaag attagacctc ttgt 334

<210> 3991
<211> 268
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A7

<400> 3991

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tctagcgatc gcgtcggcct ccactccacc ttcccgaata agcttaccct ttgtgtttgt 120
 gtgtctgtct ggcaatcgat cgatctccat gacgacgtcc ccgccgcgcg cacgcctgct 180
 cgccatggcg ctggcgctcg cctgcgtgct gctcgtcaag tccgcggacg ccgccacgcc 240
 cggcggctcc gcgtacgggt gcaaccgc 268

<210> 3992
 <211> 230
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-A8

<400> 3992

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 aagattcgca cggtcctctgc gcacggaaga caagcataac tcgagagctg gtccatagtgt 120
 ttagtggtgtc tgtctggcaa tcgatgaatc cccatgacga cgtccccgcc gcgcgcacgc 180
 ctgctcgcca tggcacgggg ggctgccctg caggatgcac gctaagttag 230

<210> 3993
 <211> 375
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B11

<400> 3993

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 catcgctgcc ctcagagcgg cagaggcacc ggcagaatga acgcatgcaa gcagtcctgc 180
 caaggcaccg gacgaatgaa ctcatgcagg tagtgctgca gctcctgcca ctgcagccaa 240
 gtctgctgcc acgagaactg cacctgctaa ggcattctaa gccgccgtta ccgccgccgt 300
 agccgctgcg tcatcgacgt cgtcgtctac gaagtctggt ccaactgccg cgccgaccac 360
 agcctcctct acaac 375

<210> 3994
 <211> 347
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-026-Q1-E1-B4

<400> 3994

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atgcncgtgc tcaagggccg cccccccatc cagtgtctacg ccgacttcat gcgcgccttc 120

cgcgaccact tcgccacctt catgggcaac accatcgtgg agatccaggt cggcatgggc 180

cctgccggcg agctgcgcta cccgtcctac ccggagagcg acggcacctg gtcgttccct 240

ggcatcggcg agttccagtg ctacgacagg ttcagtctga gtagcttgaa ggccgctgct 300

gaggccgtgg gcaagccgga gtggggcaac gcgggtccgg gcgactc 347

<210> 3995

<211> 300

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B5

<400> 3995

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accatgcatt cgccggctcg ccatgtaaga aacaggggag ttgaaagtgc gacacaccag 120

agaacgtgtc tgtgtatact gtgtaaaggt cctaaaggaa agagaagatg cacatattca 180

aagcctcgga actaattgct ctgttgtcca ctatgttatt caagtatata tttgttcttc 240

acttgtgttg agcaaaaata aaaaaaacat aaaaaggagg cggccgctcc aaaaggttca 300

<210> 3996

<211> 322

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-B6

<400> 3996

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gatggccacc cgccggagcc ggggaagaag gaggatgtcg ccaccacggc cgccgggcct 120

ggagcaaacg atctggacga cccgcaattc atgtgtctgcg tatgtctgga tcttctgtac 180

aaaccagttg ttatatcatg tggtcatatg tcatgtttct ggtgtgtcca caaagctatg 240
catattttcc gggaatcgca ttgtgctgtg tgtacgcagc cctatataca cttcccgagt 300
atttggaac tctgcatca at 322

<210> 3997
<211> 318
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-026-Q1-E1-B7
<400> 3997

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gctgccacga gaactgcccc cgctaatacga cctcaagccg cttcatctc cgccgttgct 180
gctgctccat cgtcgtcgtc atctatgaaa tcagggtccac ctgccgcacc tatcagcgcc 240
gcctctacac cgtcttcttc catcgacgaa gagtttagcc cttccccgtc ggcatccaat 300
cgcccaagtt gcctcccc 318

<210> 3998
<211> 338
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-026-Q1-E1-B8
<400> 3998

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actgcacccg ctaatgcacc tcaagccgcc tccatctcct ccgttgctgc tgctccatcg 180
tcgtcgtcgt ctatgaagtc tgggtccacct gccgcaccta tcagctccgc ctctacaccg 240
tcttcttcca ccgacgaaga gttgagccct tccccgtcgg tatccatcga cgaagttgcg 300
tcccctgtgt ctgatggggc agcttatgga tcggggagc 338

<210> 3999
<211> 328

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-B9

 <400> 3999

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 ttccggcgggc gcgagctggc ggcgcgacgac gggcgcatcc tggactacgg cgtggcggac 120
 ggcaacgtgg tgcacctggt catccgcgtc ccggacgtgc gcctcatcac cgtggagacc 180
 gtgcaaggcg gcaagttcaa gttccgcctg gagcccgggc gcaacgtccg gtacgttaag 240
 caacagattg ccaagggcca acccgccggc gcgccccccc gcgaacaacg ggtccttctc 300
 caaggcgaag gacttcaaga acggcaac 328

<210> 4000
 <211> 371
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-C10

 <400> 4000

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 ggccgcccgc gaggggctcc gcgacggggg cgcgcgccgc gccgcgctgg ccgaggtggt 180
 acaggggtgg acgacgacga caggtggagg agagaaggac taagtgggtg tgactggtga 240
 tgccgacgcg attggcgctt gccacctgcc gcctgccgcc tgggtgccaca acgattgtcc 300
 tcatccagac caactccaac ttgggccggg ccaaacgatt cgtttgttcc ttggccttgg 360
 gtaaaacttt g 371

<210> 4001
 <211> 360
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-026-Q1-E1-C2

 <400> 4001

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ccggtttaaat ttctcctoga cgggccagcg caattctgtg gctcgatcga tcggtcggtc 120
gtaaggcaag tgagcaagct atatatatat ataggagatt ctctgagcga gctagtagcg 180
agatgggttc cgccgtcctc ttttactgca tctgcatcgc cgctcgtcgc gcattgtcgt 240
cgtccatggt cgccgtcggg gccgccgccc cgggggaaac cccaagtgc atctcggcga 300
gcgcccttga gtgctccgct aacgtaacgg aaatagcaaa ggcgcgcaag ctgatcgatg 360

<210> 4002
<211> 341
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C4

<400> 4002

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cgacggtgga gatggagtgc cgccacttcg agtcgcagca ggtccacgac aaggcggagg 120
cgacgacggg ccccggcggc tggtagagga ttgagatcag cggcgaccac caggacgaga 180
tctgcgacgt gcgcctgctc aagagccccg aggcggactg cgccgagatc gaccactccc 240
gcgaccgctg ccgcgtcccc ctcaaccgca acgacggcat caagcagagc ggcgtccgct 300
acgccaaacc catcgcttc ctccgcaagg agccgctccc c 341

<210> 4003
<211> 322
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C5

<400> 4003

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cactgaagca gatgcacaca gatactttca gtagcttata gacggtgttg atttttgtca 120
caagaaaagg agtctaccat tgagacttaa aggatgctta gtgggtcaac tgtagggatc 180
tttccttcta catacgacct atgggactcg ctttttggtg ggtgcccgtg cgatgccacg 240
gaacataaat tgcgaacctc caatggactt catttgagac aagtgatgcc caagaaaatg 300
ggggtaaact gacacagcta tc 322

<210> 4004
 <211> 350
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-026-Q1-E1-C6

<400> 4004

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cattgcattg caggctcgtag ttgagcagca gcaaccactg cacaggatgt cgtggcagac 120
gtacgtcgat gagcacctca tgtgcgagat cgagggccac cacctgagct ctgccgccat 180
agtcggccac gacggcgccg tttgggcccga gagcaccgca ttcccacagt tcaagccaga 240
ggagatgacc aacatcatta aggacttcga cgagcctggg tttctggccc cgatcggcct 300
cgtccttggc cccaacaagt acatggtcat ccaaggcgaa cccggggctg 350
  
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<210> 4005
 <211> 455
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-F8

<400> 4005

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cgccctggcg tccgcgtcc ttggtgcggc gccggccgcc gcgaacgcgc cgggcggggc 120
gttcagcaac tgggtggcga tgaaccagca gagctacgcg ctgtacgcgc agaagtcctg 180
cggggacggt ggcaaggagc ccctggacaa taagctgtcg gaggcggaga agaagaaggt 240
cacgtacgtg gtggacccca gcggttaagg cgactacacc aacatcacgc cggcgctgga 300
ggatatcccg gtgagcaaca ccaagcgcgt gatcctggat ctcaagcccc gcgctcagtt 360
ccgcgagaag ctgttctga acatcagcat gccgtgcatc acgttcgggt cggaccccat 420
gaagcccgcc gtcgtggtct ggaacgacac tgcgg 455
  
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<210> 4006
 <211> 373
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-F9

<400> 4006

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 tggcccgccct gattcggtcc tctctgtcct cgccctcccg tctcagtggg aatgcattct 120
 tcggcaatgc cacacccagt gatcagaggc acattgagaa gccttttaaa gtgaaggagg 180
 cagaacctgt gaatgtgaca aaaccttcac cacacaagct gctggttcta ngangaagtg 240
 gtttcgttgg atcacacgtt tgcaaagagg ctttggacaa aggttttagt gtctctagtc 300
 ttaatagatc gggaaagcca tctttaaatg aaccttgggc tgacaaagtt atatggaacc 360
 aaggcaacct cct 373

<210> 4007
 <211> 455
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G1

<400> 4007

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 cctggcgggc gcgtggtaca cgacaaccac ggcaagttca cggccggggc gtggaaacca 180
 gccacgcga cttctacgg cgggcgggac gggtccggca ccacggcggg cggtgcggg 240
 tacaaggaca cgcgcgcgca ggggtacggc gtgcagacgg tggccgtgag cacggtgttg 300
 tttggcgacg gcgcggcctg cggcgggtgc tacgaggtgc ggtgctgga cagccccagc 360
 gggtgcaagc ccgacgcggc ggcgctggtg gtgacggcga ccgacctgtg cccaccaag 420
 gacaagtgtt gcaagccgcc gcaggagcac ttca 455

<210> 4008
 <211> 401
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G11

<400> 4008

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agaaattgtc aagaagacat actgtttgaa gatcaggcaa gagctgatgc atcgcttcc 120

agctgtgacg agtcgagtgg tgtagcaagc cttaaaattc agatttctct gttgaatata 180

agactgaggg cacttgaaga ggatcaggag ttcctcaatc aggtattgag ttcgctccaa 240

tgtggtagtg atgggctgca gtgtatacag gagataagca ggcacttagc agagttgcga 300

agagttgtgg ctactaaaa tgaaatggg tttgccccga gttcacactt tttggccgtc 360

atgaggttct cttttgtaac ggcaaacta tttgcagtca t 401

<210> 4009

<211> 405

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-G2

<400> 4009

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agaaccacgg gcccggcgcc aacatgagcg aacgcgtaaa gtggaggggt atcaagaaca 120

tcacctacca gcacgcgctg cagaagtaca ccgtcgagag cttcatccag ggccagcact 180

ggctcccaca gctcggcgtg ccattcatcc cggggctgct gccgcagcag caatcgggca 240

ggatacactg acatctaagg aagataatat atgatcggca ggctgcgttg tcgatatgac 300

gtggcactaa catgtacgta ccatggttta gttgttggt tggtttatgc tattttgact 360

actacttttt ttatatttga taaaaaatg cagtacaaaa ttaan 405

<210> 4010

<211> 385

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-013-Q1-E1-G5

<400> 4010

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catgcgctgt gcatcaaggt caacaccggg agtttttttcg cacggtaatt tgaaaatgaa 120
attgtggtgg aaactgtgta atccgccaat ccggtgcgga tctgcacaga gaaactctgg 180
tggtctgtgt gactaatgaa aagtgggttat tctggcttgg ccgttgtcca tcgagggaga 240
tgtaatacct gatcagccct gaaatcttaa agggctccct tctttcctca tgctgggaca 300
acatttattt acatcgggtg tgtacttggg gttctctcca tcaccgaata tatgtcggcg 360
tgattgctgg tatctaaan aaann 385

<210> 4011
<211> 459
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-013-Q1-E1-G6

<400> 4011
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cttcgctgt ttccctcttt ttcttaggcc gccctctaca cttctcgaca taaccatcga 120
gagggcggtc gagagaaacg agagcggcag acaccatggg gagctcgagg accatcgttg 180
cgtccccct gctcctctc gccctcctcc tcttggttt cgcggccacc gccgaggccc 240
gcgttgtccc cgagctgttt ggcgaggacc aattccagcg gacatgcaac caggtgcact 300
tcaggaagat gtgccagagc ttgacgaggc tcccgagggt gaccacgccg cgcgagctgc 360
tgctggcgtc gatgcgcgtc gcggcgagga aggccangga ggccaagagc ggggtggacg 420
agttcgggc gaggaaccac gagggccggc cgatggagt 459

<210> 4012
<211> 445
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-G7

<400> 4012
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cgtccgcgt ccttggtgag gcgccggccg ccgcgaacgc gcccgggcgg gcgttcagca 120
actgggtggc gatgaaccag cagagctacg cgctgtacgc gcagaagtcc gtcggggacg 180

ggggcaagga gccctggac aagaagctgt cggaggcgga gaagaagaag gtcacgtacg 240
 tgggtggaccc cagcggcaag ggcgactaca ccaacatcac cgcggcgctg gaggatatcc 300
 cgggtgagcaa caccaagcgc gtgatacctgg atctcaagcc cggcgctcag ttccgcgaga 360
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 ccgtcgtggt ctggaacgac actgc 445

<210> 4013
 <211> 448
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-G8

<400> 4013
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 tgatggccag attaactacg aggagtttgt taaggatcat atggccaagt gagccacaga 180
 agcataagct caaggcagag aggattgtgc attgcatatt agtcaagatg caatgcaact 240
 cttatttcat cgacttccag tgaaacattc tgctagttgt agtttttgaa aggcaatgca 300
 gttgctgctt tgtttttccc tccagtgtgt tttcagaact gttgattcat gtgaaactgt 360
 aatgattgcc ctccctgctg tgtcttggtt gcagttgana ccatatgtag ctacattccc 420
 cctcccacca cctccacaca tcaacttc 448

<210> 4014
 <211> 397
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-013-Q1-E1-G9

<400> 4014
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 ccgggactct atctacgatg aaatctcata gcaatgcacc tgcaaaatca aacggtttat 120
 ctaggactgg tgtacaaaga aaacttcact tggatcgtca gccaccgcag aagagtacaa 180

aaccgaccga gaacagcaat aagctagcta caaatcgggt cccagcccgg aacagcccag 240
ggaatcctgt acttaggcat tcacgcagct tgcctgaaac tggtcgacga gcagtacaga 300
aggtctcatc aatcacagag aaactgtcgc aaatgtcggg gacctccaga acacgaagcg 360
ccgtgaagcc tgcncgcccg acgatgaaag ccggaca 397

<210> 4015
<211> 455
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-013-Q1-E1-H3

<400> 4015

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aacttcgaca aaaaggcaat catcggcttg gccgggtccg gcaacttgta cgtcggggag 120
atcgacgacg gcacaaaggt ggcgggtgaag cgcgggagcg cggagtcga gcagggcatc 180
aacgagttca acacggagat ccagatgctg tcgaagctgc ggcaccggca cctggtgtcg 240
ctgatcggct actgcgacga gaaccaggag atgatcctgg tgtacgagta catgcacaac 300
ggcgtgttcc gggaccacat ctacggcagc gaggggaagg cgcgctgcc gtggaagcag 360
cggctggaga tctgcatcng cgcggcgctg gggctgcact acntgcacac gggcacggcg 420
caagggatca tccaccgcga cgtgaagacc accaa 455

<210> 4016
<211> 443
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-013-Q1-E1-H5

<400> 4016

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ccggcggcca caggaaggag aaatggcttc cgcacacaac gctctccggg tgtttttcat 120
cctagccgtg gtatgtgccg tatgcacagc gaaaaggaca ggagccaaga aggaagaatc 180
ggcggcagcc cctggtggtg ctgctggagg cagcggcggg acgttcgaca tctccaagct 240

cggcgcgacc agcgacggca agacggactg cacaaaggca gtccaggacg cgtggacgtc 300
 agcgtgcgaa gcgaccggaa ggcgcacggg ggtgatcccc aagggcgact acctggtcgg 360
 ccctctcaac ttactggggc catgcaaggg cagcagcatc gccatccagc tggatggcaa 420
 cctgctggga tcaaacgacc tga 443

<210> 4017
 <211> 324
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-013-Q1-E1-H7
 <400> 4017

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 aaccaaggtg gccaacggga acgactctgt ccgctatgaa gacaggacag tgggaggga 120
 agaggaagtc gttgaggcga tcaaggcaac agggcgggtgc aacctgttcc tcgtctgaca 180
 gggcacgcac tgcattgccg tggttgactg gaccacggac agcccggagc tcgtgccggt 240
 gggactttac ctggcgctgc cggaattctc gacgggtggca tctgtgctgg tcatgaaaca 300
 gtacgatccg atggcgaagc acga 324

<210> 4018
 <211> 162
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-A1
 <400> 4018

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 aaaagactac ggggatgcac atgttccagg tgcaccaggc ggatgcgtag ctgctgttct 120
 tggttgtgtt ggctccgtta cccgggtcac ccaggggacc tc 162

<210> 4019
 <211> 440
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-A3

<400> 4019

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ggaaccgagg accgcgcaaa cggcttcatg cacaacttca agaacacaac caatttcggc 120

ctcatggccg tcagcctcgg ctactacgaa acgctcatgt cctgctccgg aagcagcacc 180

agcatcgaga tgccgcccga ggaccgcgcg cgcgcgggca tctcaccggg cctcgtccgc 240

atgtccgtcg gctacaacgg cacgctggag cagcgtggg cgcagttcga gcgcgcgctc 300

gcgctcatgc aaactccgaa gcccaagcaa catcctcaag ccgccgccgc cgaccgcgac 360

ggccccgaag ccgcacaat acagcaccgc aagcaactgac gcgcttgccg ttccgagcgt 420

gcatggcctg tgtgggactg 440

<210> 4020

<211> 444

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A7

<400> 4020

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tctacgcgtg gataacctgg tcatcaccgg caagggaaac cttgacgggc agggcccagc 120

tgtgtggagc aagaactcct gcaccaagaa gtacgactgc aagatccttc ccaactcgct 180

ggtgatggac ttcgtgaaca acggggaggt gtccggggtc acgctgctca actccaagtt 240

cttccacatg aacatgtacc ggtgcaagga catgctgac aaggacgtga ccgtgacggc 300

gcccggggac agccccaaac cggatggcat ccacatgggc gactcatccg ggatcaccat 360

caccaacacc gtcattggcg tcggcgacga ctgcatctcc atcgggcccc ggacctccaa 420

ggtgaacatc accggcgtga cctg 444

<210> 4021

<211> 262

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-A9

<400> 4021

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 actaataaca tctcctcgag cgcgaggccg gcttcttgg accaatccag cagcaagcga 120
 cccggccagc accagcagcc atggagatga agaaggctct ctgcgccgcy ctcgctcgccg 180
 ccgcctccgc caccgccgtg ctggccgagg tgcctccga gtcgccctcc gaggcgcccc 240
 ccggcgccgc cgctctagag ga 262

<210> 4022
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B10

<400> 4022

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 cagctactct actatcatca catggaactt gattgtcata ttggttggtgc tatctctcta 180
 tgctacctac agccattggc atcaaaggctc taccgaagac ttcgaaatgg agcttcatga 240
 agctgagctt gctgtgagac cggaggattc aaaaatgata agtagaccaa gatatgcggt 300
 aatgaacacc gcaaaagggc caattactat agaaatatac aaagatgctt ctgctgacgt 360
 tgtggataga tttatcaact tgtgcaagag ttatcatttc aaaggaatgc catttcggca 420
 tatcat 426

<210> 4023
 <211> 452
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B12

<400> 4023

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 cacgcgtccg ggacgtggag gacgtgaagg tgacggggtg cacgctcgcc ggcaccacca 120
 acggcctgcg catcaagtcg tacgaggact ccaagtcgtc gctcaaggcc accaagttcc 180
 tgtaccagga cgtcaccatg gacaacgtct cctaccccat catcatagac cagaagtact 240

gccccaaaca catctgcgtc aagtccggcg cctccaaggt ggccgtcaac gacgtcgtct 300
tcaagaacaa ccacggcacc tccaacaagc cggaagccat cacgtcgaac tgcgccaaca 360
acctgccctg ccagggcgtg cagctcatca acgtcgacat caagtacaac aggtccgaca 420
acatgaccat gtccgtctgc aagaacgcca tc 452

<210> 4024

<211> 444

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-B6

<400> 4024

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ccaaagctat tataaatgta tcgaatggat ccaagcccc actctttgct ggcatcatag 180
catttgtgat gagcatcgca acgatggtec gtctgacctg cagcatgatg cctgggaagg 240
ttctcggtgc tgccataggt ggagctacct tctcagaagg taaatcaaaa gtacaagagc 300
gccagcggtc caagctatca gaagaggctg tggaggaagc tgaagacgcc gtctctgcaa 360
agcgcctctc ggagcttgag gagaaggtea ttgcactcct gacaaaacct gcatcaatgc 420
ctgctgataa ggangagggt ctgc 444

<210> 4025

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-B8

<400> 4025

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accatgtggg cgtcgatgcg ggcacagggt gcgatgggtg tggcggttgg gttcttggtg 120
agcggcgcac ggtgcgggtc tcccaaagtc ccccaggca agaacatcac ggccacctat 180
ggcaaggact ggctggacgc taaagcgaca tggatatgga agccgacggg tgccgggtccc 240
gatgacaacg gtggcggctg cgggtacaag gacgtgaaca agccccctt caatagcatg 300

ggcgcacatg gcaacatccc catcttcaag gatgggtctgg gttgtggggtc ctgcttcgag 360
 atcaagtgcg ataagcctgt ggagtgtctc ggcaagcccg tgggtgggtgca cataacggac 420
 atgaactatg agcctatcgc ggcgt 445

<210> 4026
 <211> 437
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-C11
 <400> 4026

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 ccgcaacgac ggcacatcagc agagcggcgt ccgctacgcc aaccccatcg ccttcctccg 180
 caaggagccg ctccccaaact gcggcgagct gctccgcgcc tacgacctct acaacgagac 240
 gtccgagaat tctaagcgt ccaaacaaaaa gttctctcgc tcgctttttt tttaaaaaaa 300
 aaatcccata tacatatagc acatttggtt cggttggttg atgcgcgcac gcatgctagc 360
 agacatcttt ctaaaaaaaaa atttaataa tttccatctc gcattatctt agtagctacc 420
 attcatgttt tctgagt 437

<210> 4027
 <211> 440
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-C2
 <400> 4027

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 gaccgaccga ccgaccagct cgaggatgaat gaacagccgc ataccgttcc tccagaaaat 180
 gcaccgctgg atcatcccta gctgcggcga caccgcccag ccgcgccctt cctcccgcca 240
 tcgagatgag tccccgaggc cggcgtcggc gtcggcgctg gcgtcggcgg ccccgteccc 300

tcagaagctg aggaaggtgg ggtcggaggg gacgctggtg ctgtccgtgc ccaaggacgt 360
 agaggagatc cggaccatgt cggcgtacgg ccgcctcaag ctcttcacct accacgagct 420
 caggaaggcc accggcaact 440

<210> 4028
 <211> 240
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C5

<400> 4028

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 agtgccaggt caagatcagg tactgcagga tgaggcgcat ggtggatgct gtgatgagtt 120
 cgtgagtggg ctaggccgtc gtctcccagt caactttggg ttgctggacc gttgtctcct 180
 tataatgtaa ttatttattt tgtatataac tccgattata tagtaaagat gtgacattca 240

<210> 4029
 <211> 427
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C6

<400> 4029

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 tcctctcct ccgactcagc atggtcgccg tcgtcctggc tgccatcgcc acagtagcgc 120
 tcgcggagga agccgatccg cgggcactgc cggcacagtg gaccaccgcg aagaagtaca 180
 aggccacgat ggacgccaag acgcggcagg ctttcgacgg cgtggtggcc gccgctacgg 240
 cagagaagcg gtcccaggcg gtggaggccg tgctgcagca gcagctgaac atggacgtgt 300
 ccctgtccaa ggcgacgtct tccggggacg agaacaacta cgtgagcgtg gccgccgcct 360
 acgagaaggc cgcgggcgcc gtcacgcgg cgacgccgga caacaagctc cgcgctatgg 420
 cgttcgc 427

<210> 4030
 <211> 435
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C7

<400> 4030

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aaaggtaatg gagtcgtcac gcatgttcca gccggccatc atcctgcttc tcctgctcat 120
tgtgaccacc gatgtggcgc aggcggcgag ggaatgcgag aaggacagcg agcgattcct 180
tggggcatgc atggcgctcg acaactgcgc caacgtgtgc cgcggtgagg gcttctccgg 240
cggcaggtgc agcaccttcc gccgccgtg catctgcact aagccgtgct aaattaacct 300
actcccggca gttcgatggt ggacgtttat tctatttatt ggcttacttg attttttccc 360
ccctaacaat aagaaaacgc acgtgctggc atgtacgttg tgttgatat gcttttcttg 420
ctggcttcat ttgct 435

<210> 4031

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-C8

<400> 4031

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ccgagccgtg cgggggctcg ggacgggaac gggacaggac cccaaaatct cagatccttc 120
ctgcccgcc gcccggtgcc gtcgacgcgt cgttcttgcc ggccgcgcct cacctccgcc 180
ctctcctcct ccaggggat cggatacgcc acaggctgcg cgatggtgct gtgggtcttc 240
ggctacggct ccctcatctg gaaccccggc ttcgacttcg acgacaaaat cctcggcttc 300
atcaagggt acaagcgac ctttaatctc gcttgcattg accacagagg cacaccggag 360
catccggcga ggacctgcac gcttgaaacc gacgacgagg ccatatgctg ggggaattgca 420
tattgtgtca aagggtggtc agaaaaagag 450

<210> 4032

<211> 448

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-D8

<400> 4032

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ggcgtccccc aaggcgcgga cgggtgctgga cctgtgcaac aacctgtacc tggacgtgga 120
ggacaacctg ggagcctgcc gccgcgccat cggtttcaag gacgccgtca ccatccgcgc 180
caccatgggc atggcggcgc aggacatgca gaactgcgac gagcagttca ggcagatcgg 240
cgagaagaac cccatggagc agttcgacgc gtcgctcgtc gagatgtccg agaactgccg 300
ctcgctctcc aacatgatct gatcgatctc cttctccacg gacgacaaca gagagccggg 360
cgttttgggc cctcgcatcg tttgtcgccg ctgctaacgt tcgcatgccc atgcccgcca 420
gcgcgctctc gcgcgacaat aactgatg 448

<210> 4033

<211> 447

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-E1

<400> 4033

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angaggcatg ggcatcagcg tgcggcggca ctgggaagca gacaatcctc ataccaagg 120
gcgacttctt tgtcggacaa ctcaacttca caggcccttg caagggcgac gtgaccatcc 180
aggtggatgg caatctgctg gcgaccacgg acctaagcca gtacaacgaa catggtaatt 240
ggatcgagat tctacgcgtg gataacctgg tcatcaccgg caagggaaac cttgacgggc 300
aaggcccagc cgtgtggagc aagaactcct gcaccaagaa gtacgactgc aagattcttc 360
ccaactcgct ggtgatggac ctcttgaac aacggggagg tgtccgggat cagctgctc 420
aactccaagt tcttcacat gaacatg 447

<210> 4034

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E12

<400> 4034

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tggtgaggtg gctgccgccc ccgccgccag cggacggcga gatacccttc ggacacgacg 120
ccgtcgcctt gtccttcttc gtggcgtgtg tggccgccac cgtcgcgctc gcgtcgtcca 180
tgtgctcggc atgcggtcgc aagccgaagg cggccacccg tgcagaccg gccgcttcgg 240
accagtccac cgggacgggc tcgggctccg tctccggtgg cggcggaagc caggaggcta 300
gcgccgcgga agccgaagag gaagtggatga gactgtcacc ggagctggcg atgcacggcg 360
ccatcgaccc ggtgacgctg ccgtcgtcga cgtcgaagcg gcgcctggtc atcagcgtga 420
gc 422

<210> 4035

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E2

<400> 4035

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gctcgcgggg cccatggagc tctggatcca gaacggcgac gacgtcaggc ttgccttgcc 120
gcatgatgtg gacgctggta ccttgaagaa cgttggttctt tctgatgggtg cagtcgtaac 180
agtgaagggg gctagagctg tgagcctccg gttgccgctt gaattaccac ttcctctcaa 240
ccgtaccact tacaaggggc gcctctcaag cctgatatcc atcgacaag ccctgcgtgg 300
tgcagcccgg tctaatacaga aaccctgct ctctcttcgc gttgaggggc cagtttcctt 360
gtcctcgact ccttccatgt ctoccaagga caagctcaag ctcaaacggg tggccccagg 420
cca 423

<210> 4036

<211> 429

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E3

<400> 4036

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 ctccccctcg tcaccccacc acatccggcc agcccaacga aaatgtcgcg cgccacagct 120
 gcgggtcctct tctacatcct cgccgtcgtt gccctcagcg cggccgaggc accggcagag 180
 tcaccgaagg caggcagtcg tgccaaggca cgggccgagt caccgaaggc aggcagtcct 240
 gcagctcctg ccaaggcacc cgagtctgct gccacgagaa ctgccccgcg taaggcacct 300
 caagccgctt ccaacccgcg cgttgccgct gcccacatgt cgtcgtcgtc taggaagtct 360
 ggtccagctg ccgcgccgac caccgccgct tctacacgtt cttcttccac ggacgaggag 420
 ttgagccct 429

<210> 4037
 <211> 436
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-E7
 <400> 4037

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 gagttcgtgg acgcccacaa cgagctccgc gcgcgctacg gcgtgccgcc catgaagtgg 120
 gacaaccagc tggcgcggca ggcgcggcgc tgggtccaacg ccatgcgcaa ggactgccag 180
 atcctccaca gcggccacga gtacggcgag agcgtgttca ggagctacga cgactggaac 240
 gccaccgcca gggaggccgt cttctggtgg ggcaaggagg aggccatcta cgacaaggag 300
 aaggagaagt gcaagtacgg caaggtcttc aaggagtgcg gccacttcgc gctcatggtc 360
 ggcaagagga gcaccaatgt cggctgcgca cgagccgagt gcttcaaagg cggcgtcttc 420
 atcacctgca actact 436

<210> 4038
 <211> 438
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-E8
 <400> 4038

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gccgcggcgg ccgtgctgac cacggtgccc ggcgctcgcg tcgccaagtc gaagctcgcc 120
 aagaagagcg acgacgtcgt gaacgggccc ctctgaccg agaagatcca ggcgaagaag 180
 acgctgatcg tggggccgga cgaggagttc aagaccgtgc agtccgccat cgacgcggtg 240
 cccgcgggca acgccgagtg ggtcatcgtc cacctccgct ctggcctgca caggggcaaa 300
 gttgtgatac cggagaacaa gcccttcata ttcgtgaggg gcaacggcaa aggccggacc 360
 tccatctccc acgagtcgc ctcttccgac aacgccgagt ccgccgcgtt caccgtgaac 420
 tcgggcaacg tcatcgtc 438

<210> 4039
 <211> 458
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-E9

<400> 4039

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 atagccgagg aattcgaagg accgaacgag aagctcctgc gtggtgtcaa cgtctaccct 120
 accgtaccag ctagccacca cacgcgtagc gcgggaaatg ccggcggcgg cggccatgac 180
 gacgaggcgg gtggtgctgg aggtgctacg gtcggcctcc cgcgacgcct tccaggtggc 240
 cttctccttc gcggcgaggc cgcccgtgtc caccatgctc aagccggcca tcaccaagcc 300
 cctctaccac caccaccag acaacgacta atctggcgca gatctacagc acggccgctg 360
 gcatgccttc acagcccgtt ggggtgtgacg actattgatg acgtactacc acatttcgtc 420
 gtcctattc tagtaagcaa cgcaaaagaa aatgttgt 458

<210> 4040
 <211> 431
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-F6

<400> 4040

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 gatagagttg gcggccgggg gagtgagtcg tcagggatgg cgtcggagcc ggtggcgcg 120

gcggtggcgg aggaggtggg ccgctggggc agcatgaagc agacgggggt gaccctgcgg 180
 tacatgatgg agttcggctc ccgccccacc cagcgcaacc tgctcctctc cgcgcagttc 240
 ctgcacaagg agctcccat ccgcttcgca cgcgcgcgc tcgagctcga ctgctgccc 300
 ttcggcctct ccaacaagcc cgccatcctc aaggtgcggg actggtacat ggactcattc 360
 cgggacatca gatacttccc tgaagtgagg agcaagaacg acgagctcgc tttcacgcag 420
 atgatcaaca t 431

<210> 4041
 <211> 384
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-F7
 <400> 4041

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 cactctacat gtccctcgtg tgtctcagcc tcttgtgttt tacactctag agctcctagt 180
 accgccgatg taagatttgc tatctgcaat gtgctcatgc aaccagcgtg tgtgcgagtt 240
 aatagtttgc acgaaacccg ctatcaatct tccctagata ttttgttgta ccaatgaatg 300
 acatgtgggt ctatgataaa tgatgacacg atgatggttc acatcatgat acatatactc 360
 aggtcggccg ctctagatga ttca 384

<210> 4042
 <211> 436
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-014-Q1-E1-F8
 <400> 4042

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 acgtttcccg gggggccggg ggagagagag gcagaaggag gaggcacgga gaggacgaga 180
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gtcggagcag ctgtgcgagg ggggtgtcggc cgtcgtggcg gcgcgccagg ggatggagaa 300
gccgctgacg gctgtggcgg aggcgttcga ggagctggcg cgcggcatgg aggccgatgg 360
cggggagctc cgcctcgtc ccttcagcga ctctgcgct ctcgtctccg tgctcttcag 420
cagcctcggg gatggc 436

<210> 4043
<211> 306
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G1

<400> 4043

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gcatgaaggt gacgcccggg tccgcaccac cgcagatgcg caggaaaccg tagtgctccg 120
cgtggacaaa gccgccgggt taccacggtc atggggcatc aacatcgaga aatcggacgt 180
gtccgctata cacctgacgc tcaggcgcgc ccacaaggcg atcatgttcg acacggccac 240
tactggggcg tcgctgacgc cgctgcccac tgtgaactgt cgcctcgatc tccgaaacaa 300
gcatgt 306

<210> 4044
<211> 456
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-G11

<400> 4044

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ctaagcaggt ctgacaggat gtcgtggcag acatacgtcg atgagcacct catgtgagag 120
atcgagggcc accacctgac ctccgctgcc atagtcggcc acgacggcgc cgtttggggc 180
cagagcaccg cattcccaca gttcaagaca gaggagatga ccaacatcat gaaggacttc 240
gacgagcccg ggttcctggc cccgaccggc ctcttcctcg gccccaccaa gtacatggtc 300
atccaaggcg agcccggcgc tgtcatccgc gggaagaagg gatctggagg cataactgtg 360

aagaagacag ggcaagcgat ggtggtcggc atctacgacg agcccatgac ccccggccag 420
tgcaacatgg tggtcgagag gctcggcgac tacctc 456

<210> 4045
<211> 435
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G3

<400> 4045

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ttaggcgcct tcttcgtccc acgctccgctc tttatttgta atctgaagct tacaggaaca 120
tttgagtgga tcatggacgg attggtaggc ctcttgaaag tccgggtggt gaggggcatc 180
aaccttgcct accgcgacgc aagaggcagc gatccgtatg tcgtcctacg acttggcaag 240
aagaaactta agacgagcgt gaagaagaga tctgtgaacc ccactctggca cgaggagcta 300
actctgaccg tcacaaattc cagcctaact ctgaagctgg aggtgttcga caaggacacg 360
ttcagcaagg acgacccgat gggggacgcg gagatcgacg tggcgccgct ggtggaggcg 420
gcgaacgcga gcccg 435

<210> 4046
<211> 451
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G5

<400> 4046

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ctgcggcacg atggacgtcg agttcagaag ggtgccatgc aagtaccccg ccgggcagaa 180
gatcgtgttc cacatcgaga agggctgcaa ccccaactac ctggccgtgc tgggtgaagta 240
tgtggcggac gacggcgaca tcgtgctgat ggaaatccag gacatgttgt cggctgagtg 300
gaagcccatg aagctctctt gggggcgcaa ccggaagggt gacaacgcca aagcgctcaa 360
tggccccttc tccatccgcc tcaccagcga gtccggcaag aaggtcatcg ccaaagacgt 420

catccccggcg aactggagac ccgatgccgt c

451

<210> 4047

<211> 377

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G6

<400> 4047

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ctcctcgtct ccaactgcgtc cgctgcacgg accgtgggcg acaccgtgca ggacgcgtgc 180

agcaagacac aattccccaa gatctgcgtg gacagcctca ccgcaaagcc agagagccag 240

aaggcgaccc cgcgccggct ggccggagctg ttcgtgaaca tcgcggccga gaagggatcc 300

gggatggcca cgttcgtgca cgggaagtac aacaacgcca aggacagcac cgtgttcaag 360

tgctacgaca gctgctc 377

<210> 4048

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-G9

<400> 4048

cggctccggaa tcacgggtcg gccacgcgt ccgcggacac gtgggagaca tctggcaagt 60

ggtgctggtg ggcaaccgc gcaagggctg ccaccaaggc caagcgctca aggaacgcgc 120

cggggtcctg gtcaacaaga acgttgggat ctccgacaac ctgggccccg gcaaaccgct 180

aaggtacttt aagggccttc cgctccccgt ttgcgccgcg ctggtcaagc aactggactc 240

cggcgaagac gacgaccaat taactatacc aagggggggg tcccggcatg ctgcacaaaa 300

ctacaacgat tcaaaacgaa cgcattgggat gggttaacaat ttctacggga agaaaaggga 360

gaaaaggga attaaaaatg tttcaaatg cctgattcc 399

<210> 4049

<211> 441

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-014-Q1-E1-H1

<400> 4049

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tacaaggacc caaatcctcc cccaagggca acaagtttct ggtccaaggg aaccacaatg 120

gccatgttct ctaacccaac cccatcaaca aaaattatgg cccaataaac atctgctgca 180

agtcgggcgc ctcaaagtgt gccgtcaacg acgtcgtctt caagaacatc cacggcacct 240

ccaacacgcc ggatgccatc acgtcgaact gcgccaacaa cctgccatgc cagggcgtgc 300

agctcgtcaa cgtcgacatc aagtacaatg gatccggcaa caagaccatg gccgtctgca 360

agaatgccat cggcaagtcc atcggcttgg caaangagct ggctgtgcatt tgaaccaatt 420

gactaacatg catatattat g 441

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<211> 443

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H11

<400> 4050

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actgctcatc gtctctcgcg ctgccgtcgc ggtcctggcc gcgcggccgg cgtctgcagg 120

cgggggagcc gcggcgggtg cggagatctg catgaagact ccgtcccccg acctgtgcac 180

caggacggcg gggaagcacg ccaacaagta caaggtggtg gacgcggtga cggtgctaga 240

gatgcagggtg gacgcgttca agaagcgcgt gaaggcggcg cggaggctcg ccaaggagga 300

ggtcaagacg gccgcgacgc ccgaggcgcg gagggcgctg aacctctgca agacctacta 360

cctggacgcc gccgacaacc tcggcgcttg caagcgcgcc atcggcttcc gcgacgccgt 420

caccatccgc gccacgatga gca 443

<210> 4051

<211> 449

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H5

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tgcaggatct aagcagagac ttgatttagt tatggacgga ttggtaggcc tcttgaaagt 180
tcgcgtggtc cggggatatca accttgcta cgcgcacgca agaggcagcg atccgtatgt 240
cgtcctacgg cttggcaaga agaaactgaa gacaagcgtg aagaagagat ccgtgaacct 300
catatggcaa gaggagctaa ctctgaccgt cacagattcc agccaaccac tgaaagctgg 360
tgagtgagca gcaagcagaa cgatcctgtt tgtgattcat tattctagac tgtttgctac 420
aggaagtgtt ccacaaggac accttcagc 449

<210> 4052

<211> 320

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H6

<400> 4052

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tccgccggaa ccggcgccac cgcaagacgg ggaaggagag gacaactagg aggaagggac 180
cgccaccaat atatatcaca cacacacaca cacactcaca cattctcaca ctcaagtctg 240
cgtttgccat ttttcttttc ttttctcta cgacttcggt attccctcct ttcattctac 300
tctccgtgaa ctcggtttgt 320

<210> 4053

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A5

<400> 4053

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gctccgacga cgacgacgcg ccgccacagc cacatggcgg acgacgccgt cgccgccgga 120
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cccgaacgacg ccgggtgcgg cagcagcagc agcgacgacc actaccagca cgacgtgatc 240
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ggcggggcggc cgtggctctg cctgcgggcg caccgcgagg gtggacgcct cgtgctgcgg 360
cagatgcgcc tgccgtcgca ggagctgctg cagccctgca a 401

<210> 4054
<211> 402
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A6

<400> 4054
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acacgtacat tcacccggcg gcaataatgg cctcggttcc ggctccggcg acgacgaccg 120
ccgccgtcat cctatgcta tgcgtcgtcc tctcctgtgc cgcggtgac gaccgaacc 180
tccccgacta cgtcatccag ggccgcgtgt actgcgacac ctgccgcgcc gggttcgtga 240
ccaacgtcac cgagtacatc gcgggcgcca aggtgaggct ggagtgaag cacttcggca 300
ccggcaagct cgagcgcgcc atcgacgggg tcaccgacgc gaccggcacc tacacgatcg 360
agctcaatga cagccacgag gaggacatct gccaggtggt gc 402

<210> 4055
<211> 434
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-019-Q1-E1-A7

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ttgtgacatg ggctacaccg aggcttagtg aagacaaggt gaggcaatgc gtcgatccaa 180

ggctcggaga cgaataccct ccaaaggctg tagccaagat ggctgctgtg gccgccctct 240
 gcgtgcaata cgaggggtgaa ttccgtccca acatgagcat cgtcgtcaag gctctgaacc 300
 ccttgtgtgca cagccgggtct ggcaaccgcc ctactgcttc gtcgggctcc cacgtgccg 360
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 aaaggaccgt cttg 434

<210> 4056
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A8

<400> 4056

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 tcttcggcga caaccagggc taccgcgagc tgtcggagct cgccgagcag gcggccaaagc 180
 gcgccgaggt ggccaggctc agggagctgc acacgctcaa gggacacgtc gagtccgtcg 240
 tcaagctcaa gggcctcgac attgacacca ttcagcagag ctacaccgtg taaactcgac 300
 tcagtttttt tatctgcttt tttttgcaga caaatacaaaa ccacacacat atatatattt 360
 gtaaagattc gttcgtattt tcattttcac cggaaga 398

<210> 4057
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-A9

<400> 4057

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 cagttatctc accaccgctt cctgtggaat actcttcacc acctaatcca gtcaactcac 180
 cggcaccacc tgtgaaaata tctctccac taactccaat gggttcacca acgtctccca 240
 tgaaatcccc tccaccaacg ggagccgtca gctcgcgcgc accgcctgta aatcacctc 300

ctccaccggc tctgtgatt tcaccatcaa ctccggtgaa aatcctccca ccaccggcac 360
cagttagctc acctcccccg ccaattcccc ttagctcagc aaccccatth gcaaaatccc 420
ca 422

<210> 4058
<211> 386
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B10

<400> 4058

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ccagcgacgc gaagtaaaca tgtctgaccg ggcaaagatg tctgggcagg cgtacgtgga 120
cgagcacctg atgtgcgaga tcgagggcca ccacctcgcg gcggcgggcca tctcgggcca 180
cgacggtgcc gcctggggcg agagcacggc gttccccgag ttcaagaccg aggacatggc 240
caacatcatg aaggacttcg acgagccagg gcacctcgcg ccgacaggcc tgttctctcg 300
acctaccaag tacatggtca tccaaggcga gcctggtgcc gtcattccgtg gcaagaaggg 360
atcaggaggc atcacctgga agaaga 386

<210> 4059
<211> 398
<212> DNA
<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-019-Q1-E1-B4

<400> 4059

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cccaaactt gcaatggaag ctttccggtc cgacagggtc aacaacaaca accgccgctc 120
caaggcgctg tgcccggcaa cttccgcggc cgtggggcg gcgagggccg atgacgccct 180
gcgccagcgc ccgcgggggc tctgcanct ccgggagcgg gatcagggcc cgctgtcgac 240
ggggcaccag cacctgcacc accatcacca ccagctgcgg cggtcggcg cgttcccacc 300
ccgccgcccg gggccggggc gccgccctcc tcagcgtgc gaaagcgacc tcaacatcag 360
ggagcaccgc tctgcanct aggtggcccg cggcaccg 398

<210> 4060
 <211> 409
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-B5

 <400> 4060

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 catcgcttcg tgcagcctgc atcggtcgac gagggctgca cgaacgatgg ggtccgcctc 120
 cgcctcagtg acgacaacca gcctgctggc gctggcgctg gcagcgctgg ctttcgtctc 180
 cagggccgcg gcgcagggca acggtgttcc cagcgtgatg atgaccctgg ccccgatcat 240
 ggacttcata tccagcaagg cgctcggagcc ggggatctcc tgctgctcgg tgctggccgg 300
 agtcgtgcag accgaccccc gctgcctctg catggtactg gacggcactg ccacgtcctt 360
 cggcatcgcc atcaaccaga ccagggcgct ggagctcccc ggcgtctgc 409

<210> 4061
 <211> 387
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-B6

 <400> 4061

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 gcagggcgctg tggagaagca gagcagcggg cggcgcacct gcacttggca gctctggcca 120
 tggcggatca ccagaggatc caccctgtag acctggaggc cggcaaccgg ccgacgacgc 180
 cgctggtgcc gggagcctcg ttccggctcg acaagggcga cccagcgcag cgcgcgaaca 240
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 cgccgcgtca cgccgcgcca ccggcgccgc ctctgccgcc gccgaagcgg cgcaggcggc 360
 gctgctgctg ccggttcccc tgctgcg 387

<210> 4062
 <211> 432
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
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<400> 4062

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tttcacatag tacgtagtca gcaggaaacg agggtaaca acctactacc tcttgccgaa 240
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cctgtcatag agcgccttca gagacttgaa gggaaggctg atgagcttgg cagcaagcct 360
ccagcgattc ctgtggagaa agaacgatcc ctcttggagt catgggatan gataaaatgc 420
atcgaatctg ac 432

<210> 4063
<211> 380
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-B8

<400> 4063

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aagcaaggga ggaaggggca gctcgcgatc gacgccgaga tcttcgaggt gacaccggcc 120
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agcaagggcc taagaccttc actcagcgac atctgctgga gcagccgatc tgaggagaac 240
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acagtccatc ctctctttct 380

<210> 4064
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C1

<400> 4064

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cggccatggc ctcgattccg gcgacgacct tcgccgtcat cttatccgtc ctcttctgtg 180

ccgcgggtgg caccgccgtc gacaacgacc tccccgacta cgtcatccag ggccgcgtct 240

attgcgacac ctgccgcgcc gggttcgtga ccaatgtcac cgagtacatc gcgggcgcca 300

aggtgaggct ggagtgaag cacttcggca ccggcaagct cgagcgctcc atcgacgggg 360

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<210> 4065

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C10

<400> 4065

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gggcgccaag gtgaggctgg agtgcaagca cttcggcacc ggcaagctcg agcgctccat 120

cgacgggggtg accgacggga acggcacgta cacgatcgag ctcaaggaca gccacgagga 180

ggacatctgc gaggtggtct tggaggagag cccgcgcaag gactgacgacc aggtgcaggc 240

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ccccgccaac ccgctcggct acctcaagga cgtgccgctg cccatctgcg cctcgctgct 360

caaacagttg gactcggacg acgacgacga tcagtaatag cacatcgacg acgacgatcg 420

atat 424

<210> 4066

<211> 235

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C12

<400> 4066

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atttgatgca tgcattgcat ggtataccta ccaatttgat gaccgacgat gtatagtttc 120
 gtcgactgct tcatacacat atatagcagc ccaattaatg taacgtcacg caaataagca 180
 tttgcggtaa ttttttgtct cgttgattcg atgaataaag ggcatgcttg agagt 235

<210> 4067

<211> 393

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C2

<400> 4067

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 aaaaaacggg gaggtgtccg gggtcacgct gctcaactcc aagttcttcc acatgaacat 180
 gtaccggtgc aaggacatgc tgatcaagga cgtgaccgtg acggcgcccg gggacagccc 240
 caacacggat ggcatccaca tgggcgactc atccgggatc acgatcacca acaccgtcat 300
 tggcgtccgt gacgactgca tctccatcgg ccccgggacc tccaaggtga acatcaccgg 360
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<210> 4068

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C4

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 gacggaggtc cattcggagc agttgtcgtc tgtaatgacg aagtagtagt cagctgccat 240
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 gcttgcaaaa agcttgggaa aattgagctc tcagactgcg aaatttacgc gtcctgcgag 360
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ggcaaa

426

<210> 4069

<211> 431

<212> DNA

<213> Zea mays

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cgcagggccg gcgccggcct cgctgtcttc tagcaggaag cagcagcagc agcccgacga 180
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ggaggccccg g 431

<210> 4070

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-C6

<400> 4070

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cgaccaacga ctctgggctg tcgcgggact ggtacgacga caccctgtac ctctacggag 180
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caaaggtaga ccagaactac aacctgacgt ggggtgttca ggtggacagc aacttcacct 360
acgttgtccg cctccacttc tgcgagctgc tgcttacca 399

<210> 4071

<211> 51
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-C7

 <400> 4071

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<210> 4072
 <211> 404
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-D1

 <400> 4072

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 ccgcctacga gaaggccgcg ggcgccgtca tcgcccgcac gccggacaac aagctccgcg 360
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<210> 4073
 <211> 394
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-D2

 <400> 4073

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 cccaaccca tgggtaagtt cgataaggag ctccagccaga tggccaacaa ctgcatggcg 240
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ctccagcgtg aggtggcggc ggcgcgcacg caggggaatgc ttggacatga ggagcacttg 360
gttttcattt aagaattcat tgaaattacg agtt 394

<210> 4074
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D5

<400> 4074

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tggttgagga tggcgtgcaa tgggacaggg tgagggcacc gcctgttgac acccttgccg 180
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agtggagaag gaacaaagaa ttcccatacg gctgggtgta tggagttggt gggcacttgg 300
agtcagtga tggaagcgaa cacttttgtc ggtgccatct tagtgatacc gtggtgctgg 360
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at 422

<210> 4075
<211> 404
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D6

<400> 4075

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ctccgggtgc tgtgccaccg cgacgacgag gccgccaacc agttcttgaa gcgcacgttc 240
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ccttacgcgt cccgcgcccc gcggcccgat tgatgaaatg atgtgcgtgg tgtttcgcat 360
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<210> 4076
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-D9

<400> 4076

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gtggacgcag gggcgggccc gtgtagctgc cgaagatgcc gggcttgctg acgggctccg 120
ctcgacgttc ccgctcgaag aacttggtga cgcgcaccac ctccaacgcc acgtcctcga 180
tccgcttgat tagatcgggg cgccactgct cgatgtcggg ggcatttcc tccaaggcga 240
taagacgctc ctgccacgg agtgcagcaa catcgacttg atcttgatc ttgtcgcagc 300
gcgtcgtgaa gtgggagttg agttcctcgc accgctctc cagcgccgcg tctacgtgt 360
cgcaacgacc agcgaacttc tcagacagcc ttgcttccat gagccgcaat tctcgcagca 420
cctggcggtt cga 433
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<210> 4077
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 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E10

<400> 4077

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gaagaacttg gtcgtccgag cgaaaccgt gccgagcttc taccaagaac cccacacaaa 120
ggttgaactt aagaaggtgc ctccaactcg tgccaagtca ccaaagctga cgcggaggaa 180
gagctgcagc gacaccctc acacaccaga gggaggaaac ggcggcggcg cagtgtgctg 240
ccggctgcac cgccacagcg tcgggaactc caaagacatc ggcggcaagg cacaatgctc 300
tccaaagact ggaccagctg ctaagtccag ggcgccccca aatccaggga agaccgagg 360
gcttccatga gaagaaagcg ggacagcagc caagcgccgc cgctgtacaa acctga 416
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<210> 4078
 <211> 428
 <212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E11

<400> 4078

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ctgtcgcggc gctcttagcc acgcctgcgg ccgtggacgc ggccacgtg gcggagatct 180

gcaggggaac cgcgttcccc gacatctgca ccagcacggt ggggagcgaa gcgcagagcg 240

ccgggggtgtt ggacgccatg gcggtgttgc ggatgcaggt ggacgcgttc aacaagcgca 300

ccgaggcggc gagggcgcac gtcaaggagg ccgccgtgac ggcgcccccc aaggcgcgga 360

cggtgctgga cctgtgcaac aacctgtacc tggacgtgga ggacaacctg ggagcctgcc 420

gccgcgcc 428

<210> 4079

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E2

<400> 4079

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ctaataattt atcactatac ataaccaata tataagccat gggcaagcgc agcgtccctc 180

ggtaccctga ggacgaggac aaaggcggct gctgcggctg cctgtgctgg tgctgctgct 240

tcctgttgtt catcgtggcg gcgctggccg gcacggccgc ctacttcttc ttcgtgtaca 300

agcccaaggc gccgtcctac tccgtgagca acatgtccgt ctgcagttc gacttcagca 360

cctccgacct gacgtgtac gtcaagctca ccgcctccg 399

<210> 4080

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E3

<400> 4080

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ataaacatca tggggcaagc ctcacggctc gtctctctcg ccgtcgtggc gctgctgtcc 120
gccggcctcc tcccgcaggc gctgggtaag ggtaggggag gcaggggaca cggtggcgcc 180
gtcaaccgcg aggtcgccgg catctgtctc cgcaccccg tcccggaggt gtgcacgtcc 240
accgccgggc ggcacgcgtc caagtaccgc gtcacgcaca acctggccgt gctgaacatg 300
caggtggacg cgttcgccaa gcgcaccgcg caggcgcgca agcacgtcgc gaggtcggcc 360
cgcaccatcc cgccgcagca gacgcaggcg ctcacgttct gcgacaccat gttca 415

<210> 4081

<211> 397

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E4

<400> 4081

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gttggggtaa accttctggc gcgaggcacc atcgctctag cggacaatgc tgaggtctcc 120
ggcaactttg cctccgttgc tgcacaatgc ctacagaaac tccccgcaa caacaatcgc 180
ttcaactaca attgtgatgg gcacacattc aactaccaca tttatgatgg attcacgtac 240
tgcgtcgttg ctaccgagtc agctggtcgc cagcttccag ttggatttat tgagagagtc 300
aaagaagatt tttccaagaa atatagcgga gggaaagcca aaaatgctag tgccaatggc 360
ctcaagcgag aatacgggcc taaactcaag gagcaca 397

<210> 4082

<211> 414

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E6

<400> 4082

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gtggcccgcg atgtcgccaa cgccggccac gccaaagccc tgacgcctgg cgggcgcgtg 120

gtacaccaca accacggcaa gttcacggcc gggccgtgga aaccgcgcca cgcgaccttc 180
tacggcgggc gggacgggtc cggcaccacg gcgggcgcggt gcgggtacaa ggacacgcgc 240
gcgcaggggt atggcgtgca gacggtggcc gtgagcacgg tgctgttcgg cgacggcgcg 300
gcctgcggcg ggtgctacga ggtgcgctgc gtggacagcc ccagcgggtg caagcccagc 360
gcggcgggcg tgggtggtgac ggcgaccgac ctgtgcccgc ccaacgaaca gcag 414

<210> 4083
<211> 413
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E7

<400> 4083

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gcagttgctt cgcaagaaga tgggtccaaac tgccaaggag ggcatgatga ataatgctac 120
cagttccgaa gtttatgtca aaatgcaata tgttttcata aaaatggacc acggaggcga 180
cactatttct gctcacaag aactgaaaga cctgaaggat gcaattattc cagaagggaa 240
tggatcagga acagtgcctg aagtatttga tcttgaagag catgtagatg cttacttgcc 300
tgtccgggtg aatgagcaga gagtaagcaa tctgttgag tctactgttg ttgctggttg 360
tattggagtt acaccgctca ttcagaagat accaacaatca gtcctctggg gtt 413

<210> 4084
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E8

<400> 4084

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tggttcggag ggcttttcag cggctcaggc aaaaggcgac aagtcagtgc agagaagata 180
gtgcttgatc taaccctgt acaggaacag agactgcaaa gtctgaagga aaggctaaat 240
gtaccttacg acgaaactcg gacggatcat caagattcgc ttagggctct atggaatgcc 300

tcctttcccg atacagagct cactatctta gtttcggaac agtggaaaga catgggggtgg 360
cagggcggtca acccagcaac tgatttcagg ggctgtggat ttgtttcgct tgaaaaccct 420
t 421

<210> 4085
<211> 408
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-E9

<400> 4085

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ggttccccgt gtgggaggcc gcgctcggcg ccggaatcgc cgccgccttc gccgctggac 180
tcgtcgggtg ctacctttcc atgccggact ccgactacag cttcctcaag ttgccacgta 240
atctcgagga actccaaatc ctcaactggcc accttgagaa ctatactagt gactacaccc 300
tacaggtgtt ggtaggttat tgcgctgtgt acatcttcat gcagaccttc atgatcccag 360
ggacaatatt catgtcactg cttgctggtg ctctgttttg gcaactgc 408

<210> 4086
<211> 344
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F1

<400> 4086

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tatccaccac cgcgccgctc cggtttaatt tctcctcgac cggccagcgc aattctgtgg 120
ctcgatagat cggtcggtca taaggcaagg tgagcaagct agagatatat ataggagatt 180
cttcgagcga actactagcg agatgggttc cgccgtcctc ttttactgca tctgcatcac 240
cgtcgtcgtc gcattgtcgt cgtccatggt cgccgtcggg gacgccgccc cgggggaaac 300
ccccaagtgc atcccggcga gcgcccttga gtgctccgct aacg 344

<210> 4087

<211> 392
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-F11

 <400> 4087

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 cgagcacctg atgtgcgaga tcgagggcca ccacctcgcg gcggcggcca tcgtcggcca 180
 cgacggtgcc gcctgggccc agagcacggc gttccccgag ttcaagaccg aggacatggc 240
 caacatcatg aaggacttcg acgagccagg gcacctcgcg ccgacaggcc tgttcctcgg 300
 acctaccaag tacatggtca tccaaggcga gcctggtgcc gtcatccgtg gcaagaaggg 360
 atcaggacgc atcacctga agaagacagg gc 392

<210> 4088
 <211> 76
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-F12

 <400> 4088

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 caaaattcaa ttcaag 76

<210> 4089
 <211> 407
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-F5

 <400> 4089

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 ggacgtcgag ttcagaaggg tgcgatgcaa gtaccccgcc gggcagaaga tcgtgttcca 180
 catcgagaag ggctgcaacc ccaactacct ggccgtgctg gtgaagtatg tggcggacga 240

cggcgacatc gtgctgatgg aaatccagga caagttgtcg gctgagtgga agcccatgaa 300
gctctcttgg ggcgccatct ggaggatgga cactgccaaag gcgctcaagg gcccttctc 360
catccgcctc accagcgagt ccggcaagaa ggtcatcgcc aaagacg 407

<210> 4090

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F6

<400> 4090

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tgcgcatca tggacgtcga gttcagaagg gtgcgatgca agtaccgcc cgggcagaag 180
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gtggcggacg acggcgacat cgtgctgatg ggaatccagg acaagttgtc ggctgactgg 300
aagcccatgg agctcccttg ggcgccatc tggaggatgg aactgccaa ggcgctcacg 360
ggcccttcg tccatcgcc tcaccagcga atccggcaag 400

<210> 4091

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F7

<400> 4091

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cacgtcattc ctctgcgct cccgtctggc cgtcttcag acgtctcaa tcggagctcc 120
cagcgtctcg gagaagagga gcagcacggc acggcggctg tggcgaggaa ggctcctgtc 180
ctgtcccatc ccaatccagc agccgtccaa ggaggaggag atccaatcgg cgtgcaggcg 240
tccaccgtcc atccatcgat ccaattccaa tctgcaggcc tctgcgtcgc ggcttggttcg 300
tggaggagag gttgctgtgg aaccgcgcg cagttagcca tgtcgtcctc cgtgctgagg 360
gctgcggccg acagggtat tcgcaagcag gccctcacgc tgaccgacgc cgcggcgtcc 420

aggattcggc agctcctc

438

<210> 4092

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-F8

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gaccgcaagt tcaaggcgaa gaaggctaac agcacgcggt accagacacg gcggaaagcg 180

gacctgacgt tcgcctacga cgtgctgcag gccaacacca acaactacca ggtgcagggtg 240

accatcgaca actggagccc catcagccgg ctggacaact ggaacctcac ctgggagtgg 300

aagcgcggcg agttcatcta cagcatgaag ggcgctaca cgctgctcaa ggaaggcccc 360

gcctgcatct acagccccgc agcgggctac tacaaggaca tggaactcaa ccccg 415

<210> 4093

<211> 404

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G10

<400> 4093

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gtgtcctgga ggtcaccctg gtgtcggcaa atgacctcaa gaaagtgtcg ctcttctccc 180

ggactcgcat ctacgccgtg gcttccatct cggattcga cctccgcac cttcccaca 240

gcacccaagc agaccacagc aacggctgca acccctgctg gaacgccgtg gtacacttcc 300

ccatcccggc tgccgctgac acccgggcc tcgcactcca cgtgaggctc cgcgcccagc 360

gtctatacct gggcgatcgc gacatctgcg aagtgtttgt gccc 404

<210> 4094

<211> 349

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G12

<400> 4094

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gagcaagaaa tagtgccagc attcatacaa ttgcaagatc ctcccgaata gcttgggtgt 120

ggattttgtg acgaacgtcc agatccgcgg catcacggct gctcaacagc aagttcttcc 180

acctcaacat cgtcgagtgc aagaacgtgc tgatcgacaa agtgaccgtc aaggcccccg 240

gggatagacc caacacggac gggatccaca tcggggcgctc cagcaacgtg accatgagca 300

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<210> 4095

<211> 248

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G3

<400> 4095

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tacactgtag caagggactg gtttagtctt ctgtactttg gttattatgt tggaattgca 120

acgattacag taaatgagaa tgacatcacc tgggtgcctac gacataagac atgttgattt 180

attcacaacc aacagcggca gaaaaggcat caggaaacat cccaatcttc aaagacggaa 240

acggctac 248

<210> 4096

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G5

<400> 4096

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tgcagcgctc gtcgccggcg ggtcatgcgg gccccgaag gtgccgcccg gtcccaacat 120

caccaccaac tacaacggca agtggctcac cgccagggcc acctggtacg gtcagcccaa 180

cggtgccggc gctcctgaca acggcggtgc gtgcgggata aagaacgtga acctgccacc 240
 ctacagcggc atgacggcgt gcggaacgt ccccatcttc aaggacggca agggctgcgg 300
 ctcatgtac gaggtgagat gcaaggaaaa acctgagtgc tcgggcaatc cagtcacggt 360
 gtacatcaact gacatgaact acgagcctat cgctccctaa c 401

<210> 4097
 <211> 404
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-G6

 <400> 4097

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 ctggatctca agccccgcgc tcagttccgc gagaagctgt tcct 404

<210> 4098
 <211> 405
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-019-Q1-E1-G7

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cgccccctgc ggctgagggga ccggctgctg atgactccgc cggctg 405

<210> 4099

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G8

<400> 4099

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cgccgcgctc gccgtccgag gcgtgcagct cgtcgccacg cagtgatcta tccccatgcg 180

tgcgtgtgtg tcccgctgtt tcgtttcttc cctgacatga tatgatttct actccgttac 240

tgatgattca ttgattccgg ccgccccgc attgttcatt atattaggtg acgtctgcgg 300

gcgcgtgcgg ggatccatcc aaatctctca ctgcgtattg tttctgtacg tacgtacgtg 360

tacgtccaag attataatga tactcataat aatctcgtcg c 401

<210> 4100

<211> 407

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-G9

<400> 4100

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cggcggcggg ggcggcgccc cgcctgtgag gcagcagacg tacaggatct actgcaaggc 240

tggggaggac cagtacagcc tcgcctcccg cgacggcaag gtctgcctcg tgcgcacgga 300

ccgtgatgac gacgcgcagc actggatcaa ggacatgaag tacagcacca gggatgaagga 360

tgaggaaggc taccctgcc a tcgtcctcgt caacaaagcc actggag 407

<210> 4101

<211> 382

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H11

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tgtgaccttg caaccacta cctctgccac ccctgcgccc tctgccagga gggtcgcgag 180

ctgcgcgcga gggttcccca ccctggattc aacaatgggc actccgtctt tgtcatgatg 240

ccgcccattg agcagaccat ggggcgtggc atgtgagcta ttccaccacc ttccctgccc 300

tagttttatc tgtgcttccc gtggtttatc atctgctgct gttggccttg atgtgtgatg 360

tgtcctttgt tcgtcagtaa at 382

<210> 4102

<211> 384

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H4

<400> 4102

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cgcgcccgcg gggctcctgg ccgacatgaa ggccgcctg cgcgcgctct tcgacctccc 240

cgacgacgcc aagcgccgca acgccgacgt catccccggc agcggctacg tcgcgccttg 300

ccccgccaac ccgtccacg aggccttcgg gtcctcgac gccgccgcgc gcggcgacgt 360

cgacgccttc tgcgcgcgcc tcga 384

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<211> 398

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-019-Q1-E1-H5

<400> 4103

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gaagaggaaa tccaatgtgg aatacacaga ggacgagaag aaagccgtga tcgcggctct 180
gaaaaagaag gctttgagcg cctcacagaa gtttaggcatt tccatgaaga gggggaggaa 240
gagcagcaag gtgatgtcca tctcgattct ggatgagcgt gaacctgagg aggtgcaggc 300
tgtggatgcc ttccgccagc ttcttgact tgaagagctg ctaccatcgc agcatgatga 360
ctaccacatg atgctaagat ttctcaaggg aagaaagt 398

<210> 4104
<211> 420
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-019-Q1-E1-H6

<400> 4104

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aggagctgg atggcattca ggtggagcta caagcaaccg acccgagcga aatgagcatg 180
gacatcgtca agtcgcgagc cctctgaaac agccccggcc gctgcacctg cacgctgcag 240
gggcgcacat gctcctgcat gcccggtggc cgtcgaatcc ttgcttgtgt gttgggaacg 300
gtcttgtgtt ttctgtctct tgttttctct gaagcanaag ccttgcattc tgtatgagac 360
tgtatgccat tttcaatctt tttctctccc catatctctg ccttagtccc gctacggctg 420

<210> 4105
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F12

<400> 4105

gacccgcgcg tccacgacga tgacccggcc ggcctctctc ctcaccttcc tgctcgccgc 60
ggcggccgtg ctgaccacgg tgcccgcggt cgcgctcgcc aagtcgaagc tcgccaagaa 120
gagcgacgac gtcgtgaacg ggcccctcct gaccgagaag atccaggcga agaagacgct 180

gatcgtgggg cgggacgagg agttcaagac cgtgcagtcc gccatcgacg cggtgcccgc 240
cggcaacgcc gagtgggtca tcgtccacct ccgctctggc ctgcacaggg gcaaagtgtg 300
gataccggag aacaagccct tcattcttctg gaggggcaac ggcaaaggcc ggacctccat 360
ctcccacgag tccgctcttt ccgacaacgc cgagtcgcgc gcgttcaccg tgaactcgga 420
caacgtcatc gtc 433

<210> 4106
<211> 178
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F2

<400> 4106

acaaaaccag taaactatac acggcggcgt cgcggacatg ctgcacaaaa ctacaacgat 60
acagagcgaa cgcattggcat ggatagcagt atctaccgaa agaaaacgaa gaaaaggaaa 120
ataaaaaatg tatcagagtg cttgattcaa aaaaaaaaaa aaaaaaacia aaaacaac 178

<210> 4107
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F3

<400> 4107

gtaggcgtcc agaattctag ggtcgaccga cccgtccgcg gacgcatggg cggacgcgta 60
gggggatggg catcgctctg gcagactccg accacaacgg catcgggagc ttcgctggta 120
accgtgtgga tcaactacgtc agatgcgcca tgacaaatgc cttcgctaag gcattgggta 180
acgggctcag acaggggaac aacatggaca tccaacgcaa cgacaacacc agcgagatca 240
tggcagggat cgccaaggac actgagcacc tggctcagtt cgagctggag atgttcagcc 300
cggtgctgaa gctgtggcac ccgttcccgg gcgcgtccgt ggtgagcacg ctccacatct 360
gctacagcgt cttgctgaag cagtacatgt ccaaggcgac gtacctcatg aacgagctcg 420
tgcacgtgct gaa 433

<210> 4108
 <211> 438
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F4

<400> 4108

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gacgcacgcg tccaggggtg ggcagggca ggattaggca gggcagcgcc gcgccggccg   60
gaccgcccgt ccacgagcca gggactttcg gccatggggg acggtggtgc tgacgacgcc  120
tcctcgccgc cgccgcatga cgggggcttc tctacctcg ccgtcttcca caactacccc  180
ctcgtcgccc cctgtctcg cttcgccgtc ggcagtgcca tcaagttctt cctcacatgg  240
tacaaggaga acaggtggga tcccaagcag cttatcggtt ctggtggcat gccatcatca  300
cattctgcca cggttacagc actagcagta gcgattgggt tgcaagatgg ctttaactgc  360
tccctctttg caacagcaac tatatttgca agtgtggtaa tgtacgatgc ttctggtatc  420
agattgcatg ctggaaag                                     438
```

<210> 4109
 <211> 373
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F5

<400> 4109

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caggtaccgg tctagaattc ccgggccgac ccacgcgtcc atataagttc accgaggtcc   60
ccgccgtctc ttgtgtctcg gaaccggaaa gcaaacaagt ccagtacgcc aagaagtacg  120
tgcaggactc caagaacacg acggacaaga ctatggtgcc gccaccgtg taccacccgc  180
cgcaggccat ggcgtccgca taccgcccgc aacaatattg ttcgccgtac gcggcgtacc  240
cgcggcagcc ttacgggtac cctgtccgc caccgtacgg gtacaatgct gcttccccac  300
aaccggcgat gtacaactac gcagcacagc cggtagctgc accggcgagg catggcggag  360
gtatggggat ggg                                     373
```

<210> 4110
 <211> 444
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F6

<400> 4110

cggtctagga ttcccgggcc gaccacgcg tccaccgacg atggcgtcga ataagacggt 60
cctcatcgtc ggggcgatgc ttctcatcac gctcgtgctg gagggcgccc ctccggcgac 120
cgccatggac tgcaaggccg ggtgtgacga ggtcacgggc cactccaca tgagcatgga 180
ggactgcatg aagaggtgca aggagatcgc tgctaagcag gggcctaggg acccttacia 240
ggataacaaa cttgacatcc catgaactag ttaatgctcc tatatcatct gcctatccat 300
gcatgcattg cattgcgtat gcacactgtg cgtgcctgcc caciaagtgc gacaacacac 360
cgatctcgat ggatttgtaa tcgtgtccac tcgatcgaga gatcgatcga tgcttggtat 420
tatatttgta ttccacatta tata 444

<210> 4111

<211> 438

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-F7

<400> 4111

aggtaccggt ctagaattcc cgggccgacc cagcggtcca ctcagtcac tacgatccga 60
caccatggat cgtcgatcgt tcagcagcac aagagacgac aatggagacg acagctcctc 120
gggtccggtc cgatcgattc ttgcttacgt gtacatagct gagggcgagg cgcagcacct 180
acttaccat taacgtcatt gccagtgaga gtttcatcat aattttattt ttattaaaca 240
agatgatata tcacgatatt tgatgacatg acacggtatt ataataaaaa aaacacaaaa 300
ctaaaaaatc tcaaacaaat aggaacacac actaaaagaa tcatacatat ataacacgag 360
aaaaggaaat aatgaaccg gtcaaaggcg ccaagtcaat tcaattcaag gggacgacac 420
aaaaaagggg gggcccc 438

<210> 4112

<211> 336

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G1

<400> 4112

attctagggt cgaccacgc gtccgatggc gtacgcgctc cttggtgcgg cgccggccgc 60
cgcgaaacgcg cccggcgggg cgttcagcaa ctgggtggcg atgaaccagc agagctacgc 120
gctgtacgcg cagaagtccg tcggggacgg gggcaaggag cccctggaca agaagctgtc 180
ggaggcggag aagaagaagg tcacgtacgt ggtggacccc agcggcaagg gcgactacac 240
caacatcacc gcggcgctgg aggatatccc ggtgagcaac accaagcgcg tgatcctgga 300
tctcaagccc ggcgctcagt tccgcgagaa gctgtt 336

<210> 4113

<211> 228

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G10

<400> 4113

attccaggtc gaccacgcg tccaaccagc ccacgacgca cgcctctcct gatccatctg 60
atacgtccag gatgacgttc acccctgtcg taacagttcc cacacggatc gaccacgac 120
actttcgcaa cagcgacga aaggggaagg tggatcgaac ttgcatccaa catcgatccc 180
aaatggtgct tcgcacgtac atgccatata aatacctata ttcgaccg 228

<210> 4114

<211> 450

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G3

<400> 4114

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gatcttaatt acaggtcata gctaagcagg tctgacagga tgtcgtggca gacatacgtc 120
gatgagcacc tcatgtgcga gatcgagggc caccacctga cctccgctgc catagtcggc 180
cacgacggcg ccgtttgggc ccagagcacc gcattccac agttcaagac agaggagatg 240
accaacatca tgaaggactt cgacgagccc gggttcctgg ccccgaccgg cctcttctc 300
ggccccacca agtacatggt catccaaggc gagcccgcg ctgtcatccg cggaagaag 360

ggatctggag gcataactgt gaagaagaca gggcaagcga tggtagtcgg catctacgac 420
gagcccatga ccccgccca gtgcaacatg 450

<210> 4115
<211> 356
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G5

<400> 4115

agtaacggtc cagaattccc gggccgaccc acggtccac tcaaagttga agcatgtggc 60
aggtcttgat gcgctgcagc acctcagact tgtctttcct ccgtccaccg agacatttta 120
tttcgaagag ctaataattt tccggagcgt tgccttccca cggtaggtgg aaccacagga 180
tcaaaagtgc aaaaggccgc gacaggttga attgcaatgt ggtctgtcac agtgacacagg 240
acctgcctca agggtagaaa aatgtgaaat ctctgcagc atatccccga ggtgcgcattc 300
ataatctgca agggaaagag atactttcgg taaaacaaga cccgcggaac caacaa 356

<210> 4116
<211> 442
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-G7

<400> 4116

ggtccagggt tcccgggccc acccagcgt ccgagatcat catctccatc caccgcccgc 60
cgtagctagc tagatctgct gccatggctt cctttggcga ggctcccgc ggtgacgccg 120
gcagcggcga gaagatcttc cgcaccaagt gcgcgcagtg ccataccgtg gagcgagggtg 180
gcgcgcacag gcagggaccc aacctgcacg gcctcttcgg tcgtcagtca aggaacaacc 240
tcgggtaagc ctaatccaag ggcaacaaga acatgggcgt cctccgggaa gagggcacac 300
tgtgtgaata actcctcaca cccaagaagt atattccaag cgcacaaaga tggctcttccc 360
ggggctcaag aagcctaagg agcgaaccga tctcatcgcc tacctcaagg aatccacggc 420
ttaacttctt ctagctatct ta 442

<210> 4117
 <211> 441
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-G8

 <400> 4117

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 agcagagatc agatcatcca tcggcaatgt cgaacatcgg gcagtccttc caggccggca 120
 aggctgaggg ccagggcgag taccaggcgg agcacgcggc gcagtgcgtc aaggacaccg 180
 ccgcagccgc ggccgacagt ggcgagctgc agcagcaccg cccacccggc accgttgagc 240
 aggtggcgca gacgggccag ggcgtggcgg caggcgtcaa ggacacgggtg gcgggcgcg 300
 cggttggcgt cacgaacacg gtggcggcg tgggcgcggg cgtcacgaac acggtcacgg 360
 gcgcccgtgg cgggcgtcac gaacacgggtg accggcgcg cggccggtgt caaggacacc 420
 gtgaccggcg gccactgatc g 441

<210> 4118
 <211> 418
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-007-Q1-E1-G9

 <400> 4118

 attccaaggg cgacccacgc gtccacacag attactttct gttgcttcta gttcacagat 60
 tctctatgtt ggtgatcaca tatacggaga tattctgcgg agcaagaaag ttctaggctg 120
 gcggactatg ctggtgattc cagaactaga acaagagctg aagcttctct cagaatcaaa 180
 gtctactcgt aaggagctta gacatcttag aatggagcgt gattcaattg aagacaaaat 240
 ccatcatctt gaatggtctc ttaagcttga tgatatctca gaaaaccaga aggagaaatt 300
 gttctctgaa catgacaatc tgctgaaaca gagagggcat gttcgtggtc ttcacaaaga 360
 agctcagaag caacatcatc agaagtttca taagggtgtg ggacagctca tgaagact 418

<210> 4119
 <211> 424
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-007-Q1-E1-H1

<400> 4119

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agcacccctg gttcaaaaag gggtagaggc cggccgtcat cctggcacac ccgcacggct 120
caagcacctt caaggatgtc aagggtcgct tcagcaacgc cgaccacaag gacagcatca 180
gcaaagtgga acagccggcg gacagctcct tgaagccggc gaccctgaac gcgttcgaca 240
tcattctcca ctccagaggg ttcgacctgt caagcctgtt cgangtggac caagagcaga 300
aggccagcaa ctgcgggttc atgacccaga agccggcgtc ggcgatagtg tcaaagctgg 360
agcagatcgc tgagacagag cgcttcatgg tgaaaaaaca agacgggctg gtgaagctgc 420
aggg 424
```

<210> 4120
 <211> 443
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H12

<400> 4120

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gggccgacac acgcgtccag cgccatgagc tccccgtggt gcgcgcggcg tcgtgctcgt 60
cgtggccgcc gacgtcgcca acgccggcca cgccaagccc ctgacgcctg gcgggcgcgt 120
ggtacaccac aaccacggca agttcacggc cgggccgtgg aaacccgccc acgcgacctt 180
ctacggcggg cgggacgggt ccggcaccac ggccggcgcg tgcgggtaca aggacacgcg 240
cgcgccaggg tatggcgctg agacgggtggc cgtgagcacg gtgctgttcg gtgacggcgc 300
ggcctgcggc ggggtgctac aggtgcgctg cgtggacagc cctagcgggt gcaagcccag 360
cgcggcgaca ctggtggtga cggcgaccga cctgtgcccc cccaacgacc aacagtccgc 420
ggacagccgc ggggtggtgca acc 443
```

<210> 4121
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H3

<400> 4121

aactcaaggg tcgacacacg cgtctagtct tegtctcact caccgccct tcacgcctcc 60
ctcaccaaatt aaggtcccg ccttttccga cattcacacg ggggacagga aatcagcggc 120
catggcctcg attccggcga cgaccttcgc cgtcatctta tccgtcctct tctgtgccgc 180
ggctggcacc gccgtcgaca acgacctccc cgactacgtc atccagggcc gcgtccattg 240
cgacacctgc cgcgccgggt tctgtaccaa tgtcaccgag tacatcgcg gcgccaacgt 300
gaggctggag tgcaagcact tcggcaccgg caagctcgag cgctccatcg acgggggtgac 360
cgacgggaac ggcacgtaca cgatcgagct caaggacagc cacgatgacg acatctgcga 420
cgtggt 426

<210> 4122

<211> 400

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H5

<400> 4122

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aaggacgtgc cgctgcccatt ctgcgcctcg ctgctcaaac agttggactc ggacgacgac 120
gacgatcagt aatagcacat cgacgacgac gatcgatatg taatagcacg tcgtcgacga 180
ccgaccgcag tcgtcgacga ctggctggca ctaaaccaca aatcctcttc acctggatta 240
caaatatgta actgagaaag gaaaggaaaa caaaaatgta actgcgtggc tgtacaaaaa 300
aaaaaaaaaa aaaaaaaaaa aagaaaaaaa aaaaacagga aaaaataaaa agaaaaaaa 360
aactacaggg agaaaaaata aaaaaaaaaa ggggcggccg 400

<210> 4123

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H6

<400> 4123

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 cacgaaggct gtgcaggagg catgggcatc agcgtgcggc ggcactggga agcagacaat 120
 cctcataccc aagggcgact tccttgtcgg acaactcaac ttcacaggcc cttgcaaggg 180
 cgacgtgacc atccaggtgg atggcaatct gctggcgacc acggaccta gccagtacaa 240
 ggaacatggg aattggatcg agattctacg cgtggataac ctgggtcatca ccggcaaggg 300
 aaaccttgac gggcagggcc cagccgtgtg gagcaagaac tctgcacca agaagtacga 360
 ctgcaagatc cttcccaact cgctggtgat ggacttcgtg aacaacgggg acgtgtccgg 420
 gatcacgctg ctcaact 437

<210> 4124

<211> 431

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-007-Q1-E1-H7

<400> 4124

ccacgcgtcc acggagcccc ggctgagcgt gatcgtgagc gccgtgctca ccagccgcgc 60
 catcttccag cgcataga actacaccat ctacgccgtg tccatcacca tccgcatcgt 120
 gctgggcttc ctgctcgtcg cgctggtctg gaagtccgac ttcgcgccct tcatggtgct 180
 catcattgcc atcctcaacg acggcaccat catgaccatc tccaaggacc gcgtgaagcc 240
 gtcgccgacg cccgactcgt ggaagctcaa ggagatcttc gccacgggca tcgtgctagg 300
 gacctacatg gcgctcgcca cggcgctctt cttctacctg gcgcacgaca ccgacttctt 360
 caccaacgcc ttcggcgtgc ggtccatcaa ggagaacgac aaggagctga tggcggcgct 420
 gtacctgcaa g 431

<210> 4125

<211> 94

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A1

<400> 4125

ccacgcgtcc gactacgtca ccgttcccaa gaacatggcc aacatcttca tgtacggcga 60

cgggccgaca cagacggtgg tcaccggcga caag

94

<210> 4126

<211> 447

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A11

<400> 4126

ttcccggggc gacacacgcg tccaagcacc tcctcttccc cgcgcgggca acaactcagc 60
cgccgcaacc gccacatcag ccatgggctc ctgcgcaacc aagcccaaga cgcttgaggg 120
gcaggcccca gctgaggccg ccgtctccac acccaaggtt gcgcccagg ccactccaat 180
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tgcggcggcc gacgttgagc atcagaaggc taatgaggtg ctgctccag aggcggccgt 300
cgccgagccc gaccacaagg aggaggaagc cgtggagaag accgtcgtcg aggaggagaa 360
gccagcggca gcagcccatg cagaggaaaa ggtcgccacc gccgccgaga ccacgacgac 420
ggtggaggcg aagaagaacg ccgagga 447

<210> 4127

<211> 432

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A6

<400> 4127

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gccgtctcta cggctcgtta taagccgccg catccaggga tggagatgaa gaagatcgcc 120
tgcgccgtcc tcgtcgccgc ctcgccacc gtggcgctgg ccgaggagg gccggctccg 180
tccccacca gcggctctc cgcggtcgca cccgccatcg tcggggccgc cgtggcctcc 240
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gaccaagggg gggagagact tggctgcgt gcgctgctct gctgctccc cgcattccc 360
atgcgtgggt ggggtgtgctc tgattgggca cggcagtggc acaccttcgt ctctcttttg 420
tttgtttttt tc 432

<210> 4128
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A7

<400> 4128

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tccccgggtcg acccacgcgt ccatgcaagt accccgcgcyg gcagaagatc gtgttccaca 60
tcgagaagggg ctgcaacccc aactacctgg ccgtgctggg gaagtatgtg ggggacgacg 120
gcgacatcgt gctgatggaa atccaggaca agttgtcggc tgagtgggaag cccatgaagc 180
tctcttgggg cgccatctgg aggatggaca ctgccaaggc gctcaagggc cccttctcca 240
tccgcctcac cagcgagtcg ggcaagaagg tcatcgccaa agacgtcatc ccgccgaact 300
ggagacccga tgccgtctac acttccaacg tccaattcta ctagactttg aattcccttc 360
gattcatccg gcgcgggtggg ctatggacct gcagcagcaa gctaattaag tttatatata 420
ttgcatgaga gagcatgcac 440
```

<210> 4129
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-A8

<400> 4129

```
ccacgcgtca actttttttt tttttttttt tttttttaag acacgatttc ttcattctgtt 60
tctgcttggt aaaaccagtc ccagcttaca ccaaggctct gctttcactt gaaggcgtga 120
taccaagatc cctactgctc aaagaatgtg cacagaacat ggtgtaaaac taaaagcaaa 180
caaaccaaca ttttttggct tacttatctc atctcaacct ggatctccat ctctctgtct 240
cccagggttt tacaagctgt acaggcgcag ccgggatccg gagccaccac tcccgcgaatc 300
tcctcaccag ctctctactg ctcttcttcc tcaccggcat ctgtcttggt tattcttcta 360
gaaggattag tagaacgatg gtcctcaagg gcacgaacgt gaatatcgca gccacagcaa 420
ccagtgcagc tgc 433
```

<210> 4130

<211> 444
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-A9

 <400> 4130

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 tttccctctt tttcttaggc cgccctctac acttctcgac ataaccatcg agagggcggg 120
 cgagagaaac gagagcggca gacaccatgg ggagctcgag gaccatcggt gcgtccccc 180
 tgctcctcct cgccctcctc ctcttggtt tcgcggccac cgccgaggcc cgcgttggtc 240
 ccgagctggt tggcgaggac caattccagc ggacatgcaa ccaggtgcac ttcaggaaga 300
 tgtgccagag cttgacgagg ctcccgagg tgacaacgcc gcgcgaactg ctgctagcgt 360
 cgatgcgcgt cgcggcggat aaggccagg aggccaagag ccgggtggac gagttcgcgg 420
 cgaggaacca cgagggccgg ccga 444

<210> 4131
 <211> 162
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-B1

 <400> 4131

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 acatcatggt cgtgggcgcc gtccttgccg cgcttgctgt cggcgggtcc tgcgggcccc 120
 ccaatgtgcc gcccgcccc aacatcacca cgaactataa cg 162

<210> 4132
 <211> 453
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-B10

 <400> 4132

 ggtctagaat tcccgggccg acccagcgt ccaataacac aggtgagcgc gacgatggga 60
 tccctcgta ataacatcat ggtcgtgggc gccgtccttg cggcgctcgt cgccggcggg 120

tcgtgcgggc ccccggaaggt gccacccggc cccaacatca ccaccaacta caacggcaag 180
 tggctcaccg ctagggccac ctggtacggt cagcccaacg gtgccggcgc tcctgacaac 240
 ggcggtgcgt gcgggatcaa gaacgtgaac ctgccaccct acagcggcat gacggcgtgc 300
 ggcaacgtcc ccattttcaa ggacggcaag ggctgcccgt catgctacga ggtgagatgc 360
 aaggaaaaac ctgagtgtc gggcaatcca ttacgggtgt acatcactga catgaactac 420
 gagcctatcg ctccctacca cttcgacttg agc 453

<210> 4133
 <211> 432
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-B12

<400> 4133

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 ctgcggggcg aggaggagga ggacaaggag gagatggtga agctgatcag ggtcggcatg 180
 gcgtgctcg agagcaacgt ggacaaccgg tgggagctca agaccgccat cgagaggatc 240
 gaggagctca aggcgaagga gcgccccgac gaggagcaag cgacggtgat cgacaggagc 300
 tacagcgatg ttgccctcaa ctgatcatcg acacgaaccg gccgggaatc gatcgatang 360
 gaaggttgtg cgcaagctga tgatatgagc ccaaaatgtg atgacctgca tgcagccga 420
 gaccctaaac at 432

<210> 4134
 <211> 326
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-B2

<400> 4134

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aagcccaaga cgcttgaggg gcangcccca gctgaggccg cegtctccac acccaaaggt 180
 tgcgcccagag gccactccaa tctccgttga ggttgccggct gatgaacagg tagctganaa 240
 ggtggtggtg gaggagccgg ctgcggcggc cgacgttgaa catcagaagg ctaatgaggt 300
 ggtcgtctcca gaggcggccg tcgccg 326

<210> 4135
 <211> 86
 <212> DNA
 <213> Zea mays
 <223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-B4
 <400> 4135

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 ggacgctgag ggcgggcgaa ggctcc 86

<210> 4136
 <211> 269
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-008-Q1-E1-B5
 <400> 4136

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 cgaattacgt gccttcttcg tcacaggctc cgctccttatt tgtagattga agcttacatg 120
 aacatttgac tagatcatcg aaggattggt aggcctcttt aaagttgggg tcgtgaaggg 180
 caataaactt gcctagcggg attcaagatg gagcgattcg tagttcgtcc taggacttgg 240
 ggagaagaag tttaacaaga acgtgaaga 269

<210> 4137
 <211> 258
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-008-Q1-E1-B6
 <400> 4137

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aagggagacg tttggaaagc aaaaaagaaa gaaaatacgg tgctgtttgg ctggcttgtc 120
tcaaaaattgc caggttatgc tttcatcata gtgtctgccg ttgaaatgtt gtagtagtaa 180
aatcgtaggg tgtaaaatgt tttcttgtaa agtcattgtg tataccaacc aaattcaaga 240
aagcttaca gttggccc 258

<210> 4138
<211> 396
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-B7

<400> 4138

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ggtgccgctc cgctctcgtc cccccgggtc cgcncgggcc tgcttgccgg aaccagggtt 120
gcagggcact cgggcaacca cttggttggg aaggcaacga caccacccta tgctctgtcc 180
tcgcccgcag attaagattg caccaccagt gaatttggaa ccttgaagca ttcattctgag 240
acatggaaaa agtgatctgc tgggcatatc tccttcaacg caagcagttc tcgaaagaaa 300
ctcttgattg ctgtgtctta gtcgtggga acactcctct ctctctctc gtgaactaca 360
catagtgggtt atatgttctt ctatgctcaa caacaa 396

<210> 4139
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-B8

<400> 4139

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ggacttcatt gccacgagg ccatctcgtc gagcgtggcc gagttcagct gggacctcaa 120
gttcccgggc gcgcaggtgc tgctggccga gttcaacatg acctcggcgg gcggcgcgca 180
gaacttcaag tcgcaggcgg acaacttcgt gtgcgcggtg ctgccggaca cggcgttcca 240
ccaggtgttc atcaccgccg gcggcgtgat ccacctccgc gacggcgcca actcgcagta 300

cgtgaccagc acggcggttcc tgctggtggt gtacgaggac ctgctgctgc ggacggggca 360
gacggtgctg tgcggggaacc agccgctgcc cccggcccgg ttgcacgagt tcgcgcggca 420
gcagatggac tac 433

<210> 4140
<211> 378
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-B9

<400> 4140

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aaaaaaaaa aagaaaaaaaa aaaaaaaaaa aaaaaaaca aaaaaaaga agacacgtca 120
aacgtgggga ggattcacat ggggcttcaa gttcccgtgc gcgcaagtgc tgctggacga 180
gttcaccatg acgtcagctg gctgcactta caaggctcgc tcttaagcgg gcaacttctg 240
gtacaccgtg gtggtggcca aagttttcca ccatgtgtta aacaccctt gcggcatgag 300
tcatcttcgc aacggggcca actcgcatta cctttccaac attttgttcc tgctggtggt 360
gtacggggac ctgctgct 378

<210> 4141
<211> 392
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-C1

<400> 4141

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tgagagcctt gttcctcctg gtcctcttct gcatcgtgca tggtgagaag gaagagtcaa 120
agggcatcga tgcgaaagcg tccgggcctg gtgggtcctt cgacatcacc aagttgggcg 180
cctccggcaa tggcaagaca gacagcacga aggctgtgca ngaggcatgg gcatcggcgt 240
gcggcggcac tgggaagcag acaatcctca tacccaaggc cgacttcctt gtcggacaac 300
tcaacttcac aggcccttgc aaggcgacg tgacaatcca ggtggatggc aatctgctgg 360

caaccacgga cctaagccag tacaaggacc at

392

<210> 4142

<211> 434

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C10

<400> 4142

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gacgtcgtgc gcaaggaggc cgagaactgc gactgcctcc aagggttcca agtatgccac 120

tccctgggtg gcggcactgg ttctggcatg ggcaacgtgc tcatttccaa gatccgggag 180

gagtaccogg accgcatgat gtcacacctc tccgtgttcc cgtcgcccaa ggtgtccgac 240

accgtcgtgg agccctacaa cgccacgtgc tccgtgcacc agtcctgtga gaacgccgac 300

gagtgcattg tccttgacaa ctatgcgctc tatgatattt gcttccgcac cctcaagctc 360

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tgctgcctgc gggtt 434

<210> 4143

<211> 313

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C2

<400> 4143

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cagtttactc acccctctta gtcgattggt atttaagtgc agtctcttcg gagatgcaat 120

tacagtccat cctctctttc ttttcccctt tctcaaagag ctaggacctt gctcgactga 180

gcatcaggct gtacggctct ttgtgatcat cttttgccag ttttcttctt gtagcacaag 240

ttgttgggca tggaactcct gttcctttca ccaatagaag cataatgatc agcactgtga 300

aacaagaacc gaa 313

<210> 4144

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C5

<400> 4144

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tccacatcct tttctctcct cctcgccggc ccaacctgat tgttcttcaa ccaagaggaa 120
gaaaggaagg aagggaccgg aagcatcagc catgtcgaac tcggcgtcgg gaatggccgt 180
ctgtgatgaa tgcaagctca agttccagga gctcaaggca aagaggagct tccgcttcat 240
cgtgttcaag atcaacgaga acgtgcacca ggtggtggtg gacaggctag gggagccagg 300
cgagagctac gacgccttca cggcctgctt ccccgccaac gagtgccgct acgccgtgtt 360
caattttgac ttctgtactg acgagatctg ccagaagagc aatatcttct ttacctcttg 420
ggccccggat acatc 435

<210> 4145

<211> 419

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C6

<400> 4145

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atcgccttcc tggcggcgca gctggtggcg acgtgcatca ccgtgtacac caactgggag 120
ttctgcaaga tgcagggcat ctgttgagc tggggcgggc ccatctgggc gttcagcgct 180
gtcacctact tcccgtgga cgtgctcaag ttcgccatcc gctacgcgt ctccggaaag 240
gcctgtcaca acatcaaaa caacacggac ttcaccaacc gcaccgacta cagcaacggc 300
gaacgatagg cgcagtgggc catggcacag atgacgctgc atggggtcaa ccaggccacc 360
gctacctccg acctcttcgg cgacaaccag cgctaccgag agctgtcgga tctcgccga 419

<210> 4146

<211> 442

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-008-Q1-E1-C7

<400> 4146

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gctgggtactg ctccgtctcc gcctgctgct tctggttggg gttgcgcagg cggtagtgga 180

gttgggtgct gctgatgata atatcgccgc cgccgctgct ggcacggcgg tggacgatgg 240

cgagccgcct cagcagtgcg cgaccccggt gagcgtggag gaggcgtgcc gcggcgcgtc 300

cgagacgcac gccggcgtag cctaacgaca ctgcatggcg tcgctgggcg ccgacccgcg 360

cagcaaggag gccggcaaca ngaacatgca cgggctggcg gtgctggcca caggatggcc 420

atcgnacacg ccccgagca cg 442

<210> 4147

<211> 430

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C8

<400> 4147

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gccgaagatg accagttcca gcaacagtaa cagcaccgcg catgtgatgc tggtagtgc 120

cggctctccgc ctgctgcttc tggttgggtg tgcgcacgcg gtagtggact tggtagctgc 180

tgataataat atcaccgccg ccgctgctgg cacggcggtg gacgatagcg agccgcctca 240

ctactgcacg accccggtga gcgtggagga cgctgcccgc ggcgcgtccg agacgcactc 300

cggcgtgggc tacgaccact gcatggcgtc actggacgcc taccgcctca gcaaggaggc 360

cgagacacga acatgcacag gctggcggtg ctggccacca cgatggccat ccatcacgcc 420

gccagcaacg 430

<210> 4148

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-C9

<400> 4148

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 gagtctggcg tgccgtcatc gatgatctac ttactgtgag gggaatgagc aaggcgcaaa 180
 atgctcttct ttctggatgc tcagccggag gtctagcagc aatactacac tgtgacagat 240
 tccatgatct gtttccagcg aaaacaaagg tcaagtgttt ttctgatgct ggatattttt 300
 tcgatgggaa ggatatctcc gggaactttt acgctaggtc aatctataag agcgttgatga 360
 atctacatgg atcagccaaa aatttaccag cttcatgtac ctcaaagcca aagcaatcac 420
 ctgagctgtg tatgttccac agtatgttgt cc 452

<210> 4149
 <211> 465
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-D1

 <400> 4149

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 atgcgaagcc gaagaagcac acggcgaagg agatcgccgc gaagatcgac gcggcgacga 180
 cgaaccgggg cggcggcaag gccgggcaag cggaccggct ggggcaggac aaggcgggc 240
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 tccaccacga ggcgcgccac cccaagctcc ccttcgagcc ggagaagctc ctcaacctgc 360
 actcctccgc ccccgctgct gccgccgccg ccggcgggcg cggccgccgc cgccgacgcc 420
 aacaactcca agcccaaagc ccggcggtcc gcggcagcct caaag 465

<210> 4150
 <211> 455
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-D11

 <400> 4150

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aagcttgcca tggcgggcgt cgggtccgac aggggtccacc accaccaccg ccgctccgag 120
gcgtcgtgtc cggcaacctc cgcggccgtg gcggcgggca gggccgatga cgccctgcgc 180
cagcgcccg cgggggctcgt gcaggtccgg gagcgggacc agggcccgct gtcgacgggg 240
caccagcacc tgcaccacca tcaccaccag ctgcggcggt cggcgggcgtt cccaccccg 300
cgcccggggc cggggcgccg cctcctcag cgctgcgaaa ggcacctcaa catcagggag 360
caccgctcct gcagcgaggt ggccggcggc acccgggcgg gctgcgcgcg tgtgtgctgc 420
tgcttccct gcgtcatggt ggaggtcgcg gtgct 455

<210> 4151
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D12

<400> 4151

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ccccttcctc cccgtcccca cccacatgcc ctgcctcgc cccgccccgc cctgcccaag 180
ctgagttccc ccacccccca acaaacaatt actagagtag ctgcattggc ggggaaatta 240
aagcgctaga agctcagcag caatggcgga gcatgcgggc gccggaaggt actggtgcca 300
catgtgcgcc gcggccgtta gccccgcga gggcgaggtg gagatgaagt gcccgttctg 360
ccacagcggc ttcctcgagg agatggagac cgcccgcggg gccgcgaccg acgacggtga 420
c 421

<210> 4152
<211> 165
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D2

<400> 4152

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gtggacgtct ttgtgggcac aggttgcgat gggtatggcg ttggagtact tgggtgaaaag 120

gtcattgtga ggacctccca atctcccacc aggcataaac atcac 165

<210> 4153
<211> 436
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D5

<400> 4153

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tccaccacca ccaccaagct caacaacagc cagctcgcga aaatattgaa agccgcaaca 120
tggcatcatc cggcgcgccc cttgggggtac ctttccccca attggggggca acggcccaaa 180
aggtaccgta ggcaaagaga agaaaaccgg cggcaaccgc taaggcggcg aaggcaaaaa 240
tattcaggac gactttctgt cgacgctgtt caaaggcatg aaggggacgg acctggtcct 300
gtgcaaagag tcctgcgcgc tctcccagca ctccaacctg gtgctgtacg gcaggattca 360
gtgcaagggc aagtgcaccg agcagaaggg catcacggcg cgggccatga aggtctgcca 420
ggaggattgc gacaag 436

<210> 4154
<211> 437
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D6

<400> 4154

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tgcacgccga ggaatcgctg cccgttgttg ccaaaagcgg cgcggcggtg gcgaggaacg 180
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gcttcaagga gccggcccgt gtcgcggacc gccgccctct ctccggcccc gggcagctcg 360
ccgcgtccac cggtttcgcc tgggccaaga agccccggtc cgctcgccagg tcttcgacgg 420
cggcagccgc cgtcaca 437

<210> 4155
 <211> 451
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D7

<400> 4155

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tgccccatcg ccgtcgtcta ggaagtctgg tccagctacc gcgccagcca ccgcctctac 180
accccccttct tccacggacg aggagttgag cccttccccg ccagcatcca ccgccgcggc 240
gtcccctgcg gctgaggggac cggctgctga tgactccgcc ggtgctgctg cccttgggaag 300
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taatcgctct cgtctggtgg ggaaggaagg a 451
  
```

<210> 4156
 <211> 432
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H3

<400> 4156

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cgctcctctt cacatggcac gggatccagc agaggaagaa ctctgtggcag gacggcatgc 180
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acgacttccc ggtgctcatc ggcgactggt acaccaagga ccacgccgtg ctggccaaga 420
acctggacgc cg 432
  
```

<210> 4157
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H5

<400> 4157

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ccgagccacc ggccggctgg gcttggcca tcaaccaggc caggctcgtc cgctggaacc 180
tgacggccag cgccgcgcg ccaccccgc agggctccta ccactacggc cagatcaaca 240
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gcttcaacgg catctccac agggaccccg agaccccgt gaagctcgt gaatacttca 360
acgtcaccga cggggtgttc agctacaacc agatgggcga cgtgcccccc gccgtgaacg 420
ggtcctcca tgt 433
```

<210> 4158
 <211> 453
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-001-Q1-E1-H6

<400> 4158

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ccgatcagcc aagagctatc catacgcaca gcgatgcacc agcacgagat actagccatc 120
atgcgcctgt cgtccctcct cctcgtcgtg gccgcccctt cggcgcgcg cgcggcgag 180
cagggtccgc cgggtggcg cagcgtctg aagccggact actacagcca gtcgtgcccg 240
cgcgcgagc ggatcatcgc ggaggtgatg cagacgaagc agatggcgaa cccgacgacg 300
gccgcgggca tgctgcgct cttctccac gactgcttcg tcaccgggtg cgacgcgtcg 360
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ctcccgggga cgccttcgac gccgtggtgc gcg 453
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<210> 4159
 <211> 432

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-001-Q1-E1-H7

 <400> 4159

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 ggtggcggtg gggatctgcg tgatgcagct ggtgcgcaac atcaccacca acccggaggt 180
 gcgggtgacc aaggagaagc gggcggccgg ggtgctggac aaccacgacg aggggcggcg 240
 ctactcgcag cagggcgtgc gcaggttctg gctctccaag cgccgcgact acatgcaggc 300
 catggacaag gtgcccacgg accctaataa gtagacgacg acgatatacc ccaatgcatg 360
 gcaagaagat atatatatca gcacaacgca actgcatgcg atgctgcttg ttgctgcaat 420
 taatccacta ta 432

<210> 4160
 <211> 374
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-001-Q1-E1-H8

 <400> 4160

 ccacacgtcc gcgcttcgac ccgtcgcgcg tccgcgaccg catctcgcgc tcggtgcgcc 60
 aggagctgga ccagccgctc aactacgcgc gcgtctacct cgccgacacg ctgccgcgcg 120
 acgtgcgcgc cgtcacgtac ctcgactccg acgtggtcgt ggtggacgac gtccggacgc 180
 tggcgctccgt ggacctcgcg ggccacgtgg tggcgggcgcc cgagtactgc cagcccaact 240
 tcagcaacta cttcacggac gccttctggt cgcacccggc gctcaacggc accttccacg 300
 ggcgcgcgcc atgctacttc aacacgggcg tcatggtcat ggacgtcgac aagtggcgcg 360
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<210> 4161
 <211> 210
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-001-Q1-E1-H9

<400> 4161

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tcatttttcta cacaattgat atagtagatt aacatcaaac tctacgtaga tgtgaagata 120

aataatgtgg taaaagtttg atgttaatct actatatcaa ttgtgtagaa aatgattata 180

tagaaacgaa tagaaaagat taagcttcaa 210

<210> 4162

<211> 326

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A1

<400> 4162

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aacgccctcc gctgcggcaa ggtcgtgggg ctgccgctgc cgccgtccta cgcccccgcg 120

cgctaagacg acgaaggcct cgttttctcc tcgtggtctg accatccaat ccaaactcaa 180

aagaacaaat acgaaagaag cgtagtgaag gggaacaaat gaatggatat atgtaatctt 240

gagatgcatg ccctctcaaa tcaactgtact ggggttctca aaaaaatcat tgtaatggga 300

gttatatata taactttatc tcacca 326

<210> 4163

<211> 422

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A10

<400> 4163

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ccacagggac accgagaccc ccctcaagct cgccgagtac ttcaacgtca ccgacggggg 120

gttcagctac aaccagatgg gcgacgtgcc ccccgccgtt aacggggccac tccatgtcat 180

ccccaacgtc atcaccgccg agttccggac cttcatcgag atcgtcttcg agaacccccga 240

gaagagcata gactccctcc acctcgacgg ctacgccttc ttccggcgtcg ggatggggcc 300

tgggacgtgg tcgccggaga tgaggaagac gtacaaccta ctggacacgg tgagccggca 360

cacgatccag gtgtaccgc ggtcatggac ggcatcatg ctgacattcg acaacgcggg 420

ca 422

<210> 4164

<211> 423

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-A12

<400> 4164

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acaacgtcaa ggccaagatc caggacaagg agggcattcc cccagaccag cagcgggtca 120

tctttgctgg aaagcagctt gaggacgggc gcacgcttgc cgactacaac atccagaagg 180

agagcaccct ccacttggtg ctgcgcctca ggggagggcat gcagatcttc gtgaagaccc 240

tgaccggcaa gactatcacc ctcgaggtgg agtcttcaga caccatcgac aatgtcaagg 300

ccaagatcca ggacaatgag ggcacncac cggaccagca gcgtttgatc ttcgctggca 360

agcagctgga ggatggccgc acccttgccg attacaacat ccagaaggag agcaccctcc 420

acc 423

<210> 4165

<211> 452

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A2

<400> 4165

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gacattggtc accacacatc tggcgatcac cagaagcttt tacttgcta tgtggggatt 120

ccacgctaag aaggctctga ggttgatcct accattgtga cacatgatgc aaaggatttg 180

tacaaagctg gtgagaaaag gctgggtacg gatgagaaga cttttatccg cgttttact 240

gaacgcagtt gggcacactt ggcacatgtt tcgtctgcct accatcatat gtatgaccgg 300

aaattagaga aggttatcaa gagcgaaaca tctggaaact ttgaattcgc acttttagct 360

atcctcagat gcgcggaaaa ccagcagag tatTTTgcaa agctcttacg aaaggccatg 420
aaaggtctag gcactgatga caagacactt at 452

<210> 4166
<211> 418
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A3

<400> 4166

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tcagcatggt cgccgtcgtc ctggctgcca tcgccacagt agcgtcgcg gaggaagccg 120
atccgcgggc actgccggca cagtggacca ccgcgaagaa gtacaaggcc acgatggacg 180
ccaagacgcg gcaggctttc gacggcgtgg tggccgcgcg tacggcagag aagcgggtccc 240
aggcgggtgga ggccgtgctg cagcagcagc tgaacatgga cgtgtccctg tccaaggcga 300
cgtcttccgg ggacgagaac aactacgtga gcgtggcgcg cgcttacgag aaggccgcgg 360
gcgccgtcat cgccgcgacg ccggacaaca agctccgcgc tatggcgttc gcgttcga 418

<210> 4167
<211> 439
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A4

<400> 4167

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tagcgcgccg tctgtcgccc ttcgttcacc tctcttctc ctctccctg cctgccaggg 120
agaggggaag tcagaggcac ggagtggcgc agagcagacg cacgtgaacc attgtagctg 180
tccctgtcgt cgtcgtcgtc gtcaacgaat ccacacaagg aaaggatgga gaagaagccg 240
accatcctca tgaacaggta cgagctcggg cgcacgctcg ggcagggcac cttcgccaag 300
gtgtaccacg gccggaacct cgcgtccggc gagagcgtgg ccatcaaggt catcgacaag 360
gagaaggatga tgcgcgtcgg catgatcgac cagatcaagc gcgagatctc cgtcatgcgc 420
ctcgttcgcg acccaacgt 439

<210> 4168
 <211> 413
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-A5

 <400> 4168

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 atcgagacac aggggaacaaa ggcaacagcc atggcgggaa cccgtgccct gtacctctc 120
 gtcgcggctg tcgcggcgct cttagccacg cctgcggcgg tggacgcggc cacgctggcg 180
 gagatctgca ggggaaccgc gttccccgac atctgcacca gcacgggtggg gagcgaggcg 240
 cagagcgccg ggggtgttga cggcatggcg gtgttgcgga tgcaggtgga cgcgttcaac 300
 aagcgcaccg aggcggcgag ggcgcacgtc aaggaggccg ccgtgacggc gtcccccaag 360
 gcgccgacgg tgctggacct gtgcaacaac ctgtacctgg acgtggagga caa 413

<210> 4169
 <211> 367
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-A6

 <400> 4169

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 cgtccttctt cctcgcctcc gttccattcc gtgcggccct ccaccgccgc cgcgcattc 120
 agggatggag atgaagaaga tcgcctgcgc cgtcctcgtc gccgcctcgg cggccaccgt 180
 ggcgctcgcc gcggaggctc cggctccggc ccccaccagc ggctcctccg ccgtcgcgcc 240
 cgccgtcggc gccgcctcg gggcctccgt cgctcattc ttgcctacg acattcagt 300
 agccggggccg ggcgctccga ggccgaagaa taaaccaagg ggatagacag tgacatggct 360
 gcgcgca 367

<210> 4170
 <211> 407
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A7

<400> 4170

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tcttgatgtg gtccggcgcg acatggtggt gaacgcgacg ctggcgtcga tggcgaagca 120
cggcggcggc gcgggggggc cggggatgca cgtgtaccac gtgtcgtcgt cgacggtgaa 180
ccctctggtg ttggcgacc tgagccggtt cctgttccag cacttcacgc ggtgccccta 240
cagcgacgcg gcagggcagc ccatcctggt gccgcccatg cgctcttctg acaccatgga 300
gcagttcgcc agctacgtgg agacggacgc gctgctgcgc agcgcccggg cgacctcgtc 360
ctcgtcgtcg ctggcgacgc gggcgcgca cctgtgcgcc aggtccg 407

<210> 4171

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-A8

<400> 4171

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gctcatgtcc gctcaccggg gcgggctcag catccttctg aagaagtaac acttctccgt 120
gaggcctgag cccctcgccg cggtagacca agccggcgca cgtcgccccg gggctcacgc 180
tcaccaccga gcccaccca attaataata tatatatata gctaggatcg atcgtcagta 240
aatggcagg ctccgccgtc ctgaggagcc cctgttccgt cctcctctac atcctcgccg 300
ccgtgccccg caccgccgcg gcgacccga ccgacgccgc catcgacgag gcgtacgcgc 360
atctcgtaa cctcaccgt aaccaggagt actgggcgga gcgcgcggag gcggcgacgc 420
cgtacaaccg cgcggcgtta cagaccgacc ccg 453

<210> 4172

<211> 364

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B12

<400> 4172

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 gcaagaccac ggcacgaag gcgctgctga tgcatacctt gttggcctgt ttgaggacac 120
 caacctgtgc cccatccatg ctaagcgtgt caccatcatg cccaaggaca ttcacctggc 180
 aatgaggatc cgccgcgaga gggcctaatac gacacctcga acatcgtgac aaaaaaatga 240
 cctcctgcgg ttattgttaa tctgatgcc a ttgtgatgac atatgagtag ggtttgtttt 300
 gtggatctca ggtcaaaacg gcggtccacc agtccaggtc gattcgggaa ggcactctca 360
 agga 364

<210> 4173
 <211> 401
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B3

<400> 4173

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 ggcggtgaag cgcgggagcg cggagtcgga gcagggcatc aacgagttca acacggagat 120
 ccagatgctg tcgaagctgc ggcaccggca cctggtgtcg ctgatcggct actgcgacga 180
 gaaccaggag atgatcctgg tgtacgagta catgcacaac ggcgtgttcc gggaccacat 240
 ctacggcagc gaggggaagg cgccgtgcc gtggaagcag cggctggaga tctgcatcgg 300
 cgcggcgcgg gggctgcact acttgacac gggcacggcg catgggatca tccaccgca 360
 cgtaagacc accaacatcc tgctggacga caacttcgtg g 401

<210> 4174
 <211> 417
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B6

<400> 4174

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 tgtggaaaca gaacaaaccc atcaaccatg gcgaactcgg cgtcggggat ggccgtgagc 120
 gacgagtgc agctcaagtt ccaggagctc aagtcgaagc gaagcttccg gttcatcacg 180

ttcaagatca acgagcagac gcagcaggtg gtggtggaca ggctggggca gccgggcgac 240
acctacgacg acttcaccgg ctccatgccc gagagcgagt gccgctacgc cgtcttcgac 300
ttcgacttca ccaccgacga gaactgccag aagagcaaga tcttggtcat ctcttggtcc 360
ccggacacct cgaggggtcag gagcaagatg ctgtacgcga gctccaagga ccggttc 417

<210> 4175

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B7

<400> 4175

ccacacgtcc gccacgcgtc cggcggtccc gggcagggca tcagcgtcgg ctgcctaggc 60
cgctacaagg acgagaagga cgtgagcgac atcacggtgc ggaactgcgt gctcaagaac 120
accaccaacg gcgtgcgcat caagtcgtac gtggacgccg agtcctgtgt gacggcctcc 180
catctcacct tcgagaacat caggatggag gaggtggcca accccatcgt catcgaccag 240
tactttctgcc cgcagaaggt atgccttggc aagcggagca actcctcgca tgtctccgtc 300
aaggacgtca cgttcgcaa catcaccggc acgtcgtcca cggccgaggc catcagcctg 360
ctctgctcgg agacgcagcc atgcagcggc gtctccctca tcgatgtcaa cg 412

<210> 4176

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-B8

<400> 4176

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gagaagactt ctccaccacc agcaccactc agtcaccac cattggcgcc caagtcatca 120
cctccacatg ttgttgtgag ctcaccacct ccagtgggtga agtcctctcc accacctgca 180
ccggttagct cggccaccatt gacgcctaag ccggcaagcc cacctgcgca cgtgagctca 240
ccacctgaag tggatgaagc atccacacca ccgacaccaa caacagtcac ctcacctcca 300
tcagagccca agtcacaccc gccacctact cctgtgagct tgccagctcc aatagttaag 360

tcctctccag cagcgtgcat tggttagctc agcaccgatg acgcctaagt cgtcacctcc 420
accggttggt gtgagctcac 440

<210> 4177
<211> 344
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C1

<400> 4177

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atatcacaca cacacacaca cactcacaca ttctcacact caagtctgcg tttgccatatt 120
ttcttttctt tttctctacg acttcgttat tccctccttt catctatctc tccgtgaact 180
cggtttgctg tccagctggc tgtaagtgtg ccagatgcct tcgttacgtc tgatgaggct 240
catgacaatg gcgattttgg catggagttg tgttagcctc gcggaaaaac tgtaactgtg 300
taagcagaac tgctatatat tgttcctaac aatgttgctc ttaa 344

<210> 4178
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C11

<400> 4178

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tccgcccgcc cgccgcgacg cgccatggct atggctcgct ccgtcgcgca cctcttcttt 120
cccattctcc ttatctccac cgcgcccgcc gtgcggggcca tcaccgacgc cgccggcggc 180
cccggatacc tccaggaggc gtgcaacaag acgctgttcc ccaagggtgtg catgcacgcg 240
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ctgctcgtgt acgtgtcggc cgagggtgggc atgaccgtgg ccgcgttcgc gcatcacgag 360
ctcaacgcca tcaaggacga cgacgtcctg tacaagtgca tcgacacctg ctccg 415

<210> 4179
<211> 419
<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-C12

<400> 4179

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tccgaaagct tttaatgcct cttgttagtg cgtaacgcta tgatggacca cacgtgaaca 120
catctttggc tcattctgaa gccaaaatac ttcattgagaa gatccataag aaggcttaca 180
gtgatgagga gatcattaca attctcacca cacggagcaa agctcagcta cttgcaacat 240
tcaatagcta caaggatcag ttcactcatg caatcaacaa ggatctgaaa gctgacccca 300
aggatgagtt tctttcaaca ctgcggggcga tcatccggtg cttcacctgc cctgacagat 360
acttcgagaa agtcattcga ctggctcttg gaggcattggg cactgatgan gatgacctc 419

<210> 4180

<211> 439

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-C3

<400> 4180

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tttccccgat gtgtgggaat accaaggcac tgtatgaact agcaagctca acaacaagga 180
tttcaaaata atcgaaaaga gagatggggg taggaagaac gggggctatg tagctagaaa 240
caaaacgtgt tgtggtttga gaggaaccca cgaaacggca ctagtttgag acagtgttcg 300
agaaatagca attgttttca aacaattcaa agaacaacag tagttttatc aaatgaattt 360
agaaaacaac actccatata tatttttctg ccttttattt caggcctcac angcanatag 420
accagattgc ccctatctt 439

<210> 4181

<211> 456

<212> DNA

<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-002-Q1-E1-C4

<400> 4181

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gctgctggac gcttccttcc ggcgcgctt cgcgcggcg ggctctgctg aggctccgt 180
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gacgtggcag tggcgggcgc aggtgggccc gctctcgcg cggttcggc tcatcgctnc 360
ggacctgctc ttcttcggcg gctcgccac gtcgtcgcg cccggcgtct ccgaggccca 420
gcaagcggaa gcngtggcga aggtcgtggc ggctgt 456

<210> 4182
<211> 382
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C5

<400> 4182

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cctcgtggcg gcagagagga cgatgggcag ggtgggtgtg gaagagacgc tctgcttgtc 180
gcagagccat gccttcaaag gcgtgtgcct cagcaacacc aactgcgaca acgtatgcaa 240
gacggagaag ttcacaggcg gcgagtgcaa gatggacggc gtcatgcgca agtgtactg 300
caagaaggtc tgctagggca tgaccggcag caagccccag ccgtacggct ggttgatccg 360
gttgacacac gtttgggcac gc 382

<210> 4183
<211> 415
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C6

<400> 4183

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cctgttcttg ataaaacgag agaaggatgg cagtgtttca gggagctgtc ctattcttgt 120
ttctcctcct cgtcgcagca gaggtgggaa ccatcgatgc caaaatggga gtagccatgc 180
ccatgcatgc cttgataatg gagaaagcga aacagcagga gacggagaag aaggaggaga 240
aaagcacgga gaaggaagag agtcaatgct tatcgccgag tctccagttc gagggcttct 300
gcttcaacag cgacagatgc gccgaggtgt gcatgaatga gagctttccc ggtggcgagt 360
gcaagcggga cgtggccatg cgcaagtgt tctgcaagaa gcttgctagt tcatac 415

<210> 4184

<211> 381

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C7

<400> 4184

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ccgtgtcgtc ggtgcggtgca ccgcgcagta gtgtgcgtag acggaagct gcgactgcga 180
gcgaggtagg gtgtgggggtg ggtgactggg taccaggagt ggggtacggt acgtagggtgc 240
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gctgtgttac tgtatcctac acctacagaa tgtgctatga tttgtactgc tataatTTTT 360
aacgaagata caaacttcta c 381

<210> 4185

<211> 458

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C8

<400> 4185

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gtggatggcg gtgccacaac ctctctgct gtcgctgctg gtcgcogtgc tagcgggtggc 120
cgccgatgtc gccaacgccg gccacgcaa gccctaacg cctggcgggc gcgtggtaca 180

cgacaaccac ggcaagttca cggccggggc gtggaaaccc gccacgcaa ctttctacgg 240
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 ggggtacggc gtgcagacgg tggccgtgag cactgtgctg ttcggtgacg gcgcggcctg 360
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 agcgtggtg gtgacggtga ccgacctgtg cccgccca 458

<210> 4186
 <211> 433
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-C9

<400> 4186

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 ccgggcctgg tgggtccttc gacatcacca agttgggcgc ctccggcaat ggcaagacag 180
 acagcacgaa ggctgtgcag gaggcattgg catcagcgtg cggcggcact gggaatcaga 240
 caatctcat acccaagggc gacttccttg tcggacaact caacttcaca ggcccttgca 300
 agggcgacgt gaccatccac gtggatggca atctgctggc gaccacggac ctaagccagt 360
 acaaggaaca tggtatttgg atcgagattc tacgcgtgga taacctggtc atcaccggca 420
 atggaaacct tga 433

<210> 4187
 <211> 422
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D10

<400> 4187

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 ctgaggctag acaaatactg agctagcctt cagaaaaaaa aagaaaagaa agagattgag 120
 aagcaggag aaaaaatggc actggcccat tgaggaagct tgagaaccag ttaacaagaa 180
 ttgccaacat attcttggac aatcttgta acagagtttt aaggtttccc agcagacatt 240

tttcgagtcc aggaagagcg cgtgcaacca ccacattcat ataattaata agcaaggttt 300
 agagaagagg caacatgggc acaaagatga agaaggggat cctgaagccg ttccgctata 360
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 aa 422

<210> 4188
 <211> 162
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-002-Q1-E1-D11
 <400> 4188

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 atctgtaatc ccattccata atgttaatgt tgatttgtgg tc 162

<210> 4189
 <211> 419
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-002-Q1-E1-D12
 <400> 4189

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 aacaatggcg ctgacgcggt ctctgcact gccatcccta gcgtaacaat aagcctagag 180
 gagaaagaaa atatcaatgg ggatgttccc acgatcacct cggccgcaag caacgaggag 240
 gaggcgttgt tcagtgtcgg agaatccacc aaggacgatg gccatcgctt gacgatggaa 300
 tgctccactc ccgtctctc cagtagccct tccactcgca agaagcgcgg ggcgttcagc 360
 ctcttcaagg cgatgttctt gtccttcggc cggagcgacg acagcatgaa gaagacaga 419

<210> 4190
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 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D2

<400> 4190

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acaactcgct ggggatggac ttcgtgaata atcgggatgt gtctcgggtc acgctgcgta 120
actccaagtt cttccagatt aacatgtacc ggttcaagga tatgctgac aaggaagtaa 180
ctgtgacagc gcccgcgcat aacccaaca ctgatggcat ccacatgggc gattcatccg 240
ggatcaccag cattaacaac gtcattgtcg tcagcgacga ctgtatctcc atcagaccog 300
ggatctccaa cgtgaacatc accggcgtga cctgcaggcc tgaccattgt atcagcatcg 360
gaagcctacg gaggtacaat gacgaggaac gacatcacgg acatcaacat caacgattgc 420
a 421

<210> 4191

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D3

<400> 4191

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tgcgcaactct agtaacgcct tggagtcattg gaagatttgc aaccaggag ataaccctct 120
gcttgtgaag acaaggctca ggcactgggc tcaagtagtg gcttgttcag tgaagcactc 180
gagctgatcc tcgtcagtgt ttatttcacg ctcttcttcc atacataata cccgtacaag 240
tggttgcgat ggcgatgaat tagtcgtgtc cgagtgaaac tagatcaatt gaccttggtg 300
ctcgatctaa tgcgtccca ggtcacattg ttgtggacag atttaattag cgtcggggtg 360
gcaaattaaa aaatgtatat gcaaagtact gttaaagggtt ggcattggtgt 410

<210> 4192

<211> 425

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D4

<400> 4192

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 tgcttcaccg ccggcctccc cctccgacgc ggcaccggcc cccgcgcacc gggcccggat 120
 gctatgctgc tgagctgcag gaccctctcc acctgggtgc gccgcctcgt cgcttgcattg 180
 ggagcagagg ttgctttgga tgctgtgcta agccaactcc aataatagca gtagacgagc 240
 cttccaagcg gttgaggatc cagggggcgat cagtaaggaa ggctagcctc tcggaggact 300
 tttggagcac gagtgcgcat gagatggaga acagcgggat ccaatcgagc aggagcatgt 360
 cttcgatcag cacgttgggt cagtccagcg atcagcatgc gtcaggaagt tgcagcaacc 420
 cgaat 425

<210> 4193
 <211> 293
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-002-Q1-E1-D5
 <400> 4193

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 ttgcatgctg tcggtcgtcc ccattcattgt gcggatgtgt ttaaagcgcc gtggacttgc 180
 gtgtaacctg caactcgtct tttgttctgt ggtctgacgt ataactctgtg tcggcatccc 240
 attctgataa ctccaagacc gcaacgagag ggcgaccttg gcaattctga ccg 293

<210> 4194
 <211> 415
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-002-Q1-E1-D6
 <400> 4194

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 acacaaataa aaacactcct caggatatta ttactagaga gcctcacttg tatgcattct 120
 cattcaagaa cgggagactg gaggttactg agatcttcaa cttttctcaa gatgatttgt 180
 taactgaaga catgatggta cttgacacac atgggtgaagt tttcatttgg attggtcagt 240

atgtggaatc aaaagagaaa cagaaggcat ttgacattgg ccagaaatac gtggagcatg 300
 caaattctat tgaagatctt tctccacatg taccactata taaagtcatg ggagggaatg 360
 agccatgctt cttcaggacg tacttttctt gggataacac agaatctttg gttca 415

<210> 4195

<211> 413

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D7

<400> 4195

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 cacgcgctct cgtggcgctc tggcaccacc ggtgccgtg tagaagcgtg cactggggcc 120
 gacgggtacc cgctcaacgt gtcctctac tgetccctcc tccaggccat ctttgatctg 180
 agggagagca ccgtcgtgct cgacgaggtt gacgagctcc tggagctcat caagaaagac 240
 gtggccgacg ctccggcatca acaggatgct gcacagcgtg tgcttgctgt ggggtcttctt 300
 ccagcagtac gtgatcacgg gccaggctga gccggacctc gccgctgcgg cgctcgccat 360
 actcgttgac gtggcagccg acaccaagca cgggagccgt gacccgatgt acg 413

<210> 4196

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D8

<400> 4196

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 accatcctca tgaacaggta cgagctcggg cgcacgctcg ggcagggcac cttcgccaag 120
 gtgtaccacg gccggaacct cgcgtccggc gagagcgtgg ccatcaaggt catcgacaag 180
 gagaaggatga tgcgcgtcgg catgatcgac cagatcaagc gcgagatctc cgtcatgcgc 240
 ctcgctccgc accccaacgt cgtgcagctg cagcaggtga tggccagcaa gagcaagata 300
 tacttcgcca tggagtacgt ccggggcggc gagctcttcg cccgcgtcgc ccgcgccggg 360
 ctcaaggacg acgccgcgag aaggctacttc caccagctcg tcagcgccgt cgacttctgc 420

cacagccgcg gcgtct

436

<210> 4197

<211> 326

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-D9

<400> 4197

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tgaccatcca gtctaactaa tccattcctg tgctgctcgg cgaaataaaa tcatcaaaaa 120

gaacaaagac gaaggaagcc tagggaaggg agaagggacg ttgggtgggg gtgagccaaa 180

tgagaacgca cggatatatc tattgatgta atcttgagat gccctctcaa atcactgtaa 240

tgggggtttaa aaaacaatca ttgtaatggg agttatatat acttttatct taacatttat 300

ttacaccagc aagtcctggt gtatgc 326

<210> 4198

<211> 95

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E1

<400> 4198

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cactaagagg atgggcagtg tgggctagtc aatct 95

<210> 4199

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E10

<400> 4199

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ctcccagcag tccaacctgg tgctgtacgg caggatccag tgcaagggca aatgcaccga 180

gcagaagggc atcacggcgc cggccatgaa ggtctgccag gaggagtgcg acaaggcgta 240
 cgtggtgaag gcggccgatg tcaccaaggc ctgcagcgtc acctgcgcca aggagaagaa 300
 cccgcgcctc agcgagaact gcaagagggtc ctgcaccctt cctccttctt gaagcgaagc 360
 cccttgaaat gaatgaacca tgcattgatg catgcatgta tgcattgcgc ggggtgacgt 420
 ggcg 424

<210> 4200
 <211> 418
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-002-Q1-E1-E11
 <400> 4200

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 ctctctcttc caacacccca tccatcagcg ctgccctcgc cattgctctt gatcccatcc 120
 agtacatcga ttctcccccc aagatcaaag gccggtggag gaagaaaggt tagggagtcg 180
 gccatgggat gcttttcatg ctgctgtgtg gcagatgacg acaacgttgg caggaggaag 240
 aagcatgacg atccctatgt tcctatccct gctcatgttt ataattttgg acctagccgg 300
 ttcccagccc caaccctgt catctccact ggcagagctc agccaattgc agtaccggcc 360
 attcatctgg aagagctgaa ggaaattaca ataaacttca gcagtgatgc cctcattg 418

<210> 4201
 <211> 420
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-002-Q1-E1-E12
 <400> 4201

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 gttccgtcca tccaacgccc cggctgtctc ccggccagat ccctctcctg catggtttct 120
 ttgcgagtgg ccggagaaga tgattggcgg gttcctctcc aaagtcctcc tgctggcttt 180
 tggctatgcc tatcctgcct atgaatgcta caagaccgtt gaactgaaca aaccacagat 240
 tgagcagctc atatttttgt gtcagtattg gattttagtt gccctgttga cagttttgga 300

gagaattggc gatttttagac tatcatgggt accgtttttac tcagaatcaa atgtgttgat 360
ctatgtagat ttgtggtacc ctaagacaaa gggaactacg tatgtttatg gcactttctt 420

<210> 4202
<211> 463
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E2

<400> 4202

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gcaaggatga gtggccggtc aggctagctg gtgcttggac gtcataagct gcctcctgcc 120
tgccgtttga ttctgtgca acaagaaggc tgacaaaaat aaaagggggg gggtcagtga 180
atggacattt taaaaccagt tagcaccggc atctaccgca agctagtttg aagttggtat 240
aataggtgca agcgaataag acggacacgt atcagtggac actgcaagta aatccaccgc 300
caaatttgcc atcctaggga agaaaaatga ttccctgggt aacttgtgga acccgattta 360
atgtgagaca agacaacaat accaggggtg agcttgccac ttggtcacga cacacacgag 420
aatacgagat gaccaagtaa aaactggaca gaatgcactc aca 463

<210> 4203
<211> 422
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E3

<400> 4203

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cctgttcttc aggacgtgtt catggagccc cagcccgggt cgccgacgtc gtcgcccttc 120
tctccgatgg gagcgccgga cgagccagag gaggaggcca ccgaagtcga tccgggcagg 180
aagtcgacct ccagctcgtc ctctcctcgt tcgtcatccg cgtcgtcggc tgatgacatc 240
ccgtgccaca tcgacgtcga gctcgtcaaa ccgtttggcg cgggtgctgcc cgagcacgaa 300
cacggagcgg aggccaaaac ggtccgatcg gcgacgccga aggaggaacg agccggagcc 360
gccacgtgc acggcgagcc ggcggactgc gcggtgacgg aggacgtaca acaggccggt 420

<210> 4204
<211> 463
<212> DNA
<213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-002-Q1-E1-E4

<400> 4204

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atgcacaaac aatgcgatga gagccttggt cctcctgggc ctcttctgca tcgtgcatgg 120
tgagaaggaa gagtcaaagg gcatcgatgc gaaagcgccc gggcctgggt ggtccttcga 180
catcaccaag ttgggcgcct ccggcaatgg caagacagac agcacgaagg ctgtgcanga 240
ggcatgggca tcggcggtgc ggggcactgg gaagcagaca atcctcatal ccaagggcga 300
cttccttggt ggacaactca acttcacagg cccttgcaag ggcgacgtga ccatccaggt 360
ggatggcaat ctgctggcga ccacggacct aagccagtag aaggaccatg gtaattggat 420
cgagattcta cgcgtggata acctgggtcat caccggcaag gga 463

<210> 4205
<211> 406
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-E5

<400> 4205

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agatgattcc tccgggcgct ctggatcatg tgactccctc catcggttga accctctttg 120
gcgtcgagac tctctccggc gttcttgctg gtgccctggg ttctggagtg cagatcgcca 180
tctctgcttc caacaccggc ggtgcatggg acaatgccaa gaagtacatc gaggtcgggt 240
ccagcgagca cgcgaggacc ctccgtccca aaggatccga ctgccacaag ggccgctgtg 300
attggtgaca ccattggtga cccctgaag gacacctccg gcccgtccct caacatcctc 360
atcaagctca tggccgtgga gtccctcgtg tttgccccct tctttg 406

<210> 4206
 <211> 447
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-E6

 <400> 4206

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 ggcgaccagc tcgttgtcgc ctccgagacg taccagcagc tgagccgcgt gtctatccgg 120
 gccatgacgg ccattctccga cctggaaacg atccacgagg acgtcgtcac cagcgcgcac 180
 cagaagcgag ccgcgctcat cgtgctcccc ttccacaagc tccaccagat cgacggccac 240
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 tgctccgtag gcatcctcgt cgaccgcggc ctccggcggcg tcgctcaggt ggccgccagc 360
 gacgtgtcat acaccatcgt tgtcatcttc ttccggtggcc gcgacgaccg cgaggccctg 420
 gcctacggca tgcgcatggt cgagcac 447

<210> 4207
 <211> 232
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-E7

 <400> 4207

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 aaggcttatc gtgtgtgtg cctccgttgc gactacgggg atattaggtt gtgtgtgtat 120
 gtggaccgac accactgttg agctgtcgac ccattagggc tatggtcatt tgagtctata 180
 tattgtaccc catctcctat gcaatacaat caactactac agattcctgc aa 232

<210> 4208
 <211> 344
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-E8

 <400> 4208

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aggggtgaatc aaattcttct cccattcctc catataaatc gtcactgtca ttagcggtcaa 180
catcatgtaa aacatctact atgtctaact ctcaacatgg gaagactaat acgtcgtctt 240
catcgtcttc atcgtcagat catacagctg cagtgataac tggccttgta cttgacgtcg 300
tgggcttcga tctgctcatg ttaaateccag gtgtacgtgt gttg 344

<210> 4209

<211> 422

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-E9

<400> 4209

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agagatacag cagcggcaag aattttctcc gcaccgcggg cgtgtgctgt tggttcgccgt 120
ccgcctccgc caagcttgga ggtgtgcgcg gcaaggaaga gacatcgaca tcggcgccag 180
ctttcgcgcc ggatagcatc aagaaaaggt ggaggaatac gacgttctgg aaaaagaaga 240
tgaatgccag gaatgagatc ggcgggctgg tggacctcgt caacgatatt tcggccaagt 300
cagatgagag cctacggggt agcaaccaca acatgccag cagggcgctg acgttcagtc 360
agctgagcgc cacatcngac gggttcagtt cgcagaacct gctcggagaa agcgggctttg 420
ga 422

<210> 4210

<211> 410

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F1

<400> 4210

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aaataatgaa gagccgcagc atggcatcat cggccgcgct cttgggtgcta gccctcgcgc 120
tagtggcggc caccgccccca catgtatcgg aggcaaagaa gaagagagcg gcggagagcg 180

gcgagggcggc ggagggcgaag aagatccagg acgacttctg ctcgacgctg tgcgagggca 240
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 tgggtgctgtt cggcaagatt cagtgcaagg gcaaattgcac cgagcagaag ggcatcacgg 360
 cgccggccat gaacgtctgc caggaggagt gcgacaaggc gtacgtggtg 410

<210> 4211

<211> 421

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-F10

<400> 4211

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 tggcggtggt cgtcgggtgtg gtcgccaccg tcaccgctc cggcaagaag gccggcgaca 120
 acttcacggt cccggggggag gcttcccttg ccacgtccgg caagtcggtc aagtcctgt 180
 gcgcgcccac cctatacaag gagtcgtgcg agaagacact gtcccaggcc accaatggca 240
 ccgagaaccc caaggaggtg ttccacagcg tggccaaggt ggcgctggag tcggtccaga 300
 cggcggtcga gcagtccaag tcgatcggcg aggccaaggc cagcgactcc atgaccgaga 360
 gcgcgcgcga ggactgcaag aagctcctgg aggacgccgc cgacgacctg angggcatgc 420
 t 421

<210> 4212

<211> 411

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F11

<400> 4212

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 gggaagcgga ggccggcgcg ggccgggaag aaggagatct acgcgaggct cgccaggcct 120
 gtgccttttg gcgacggcaa gaaggaattc tgggtggaca agaacaaagg catgatctgt 180
 atggcactgt cgtccaaagc actggtgatt actgggattg atgacagaag atactggcaa 240

cacatgccaa cttcagaatc gagattccag tctgtagcct accttcagca aatctgggtg 300
 tttgaggtgg ttggtgaagt cgattttctgc ttcctgttg gaacatatag cttgtacttc 360
 aggggccatc ttgggaagtt ctacagacga tttggccgcc gccagtgcac c 411

<210> 4213
 <211> 418
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F12

<400> 4213

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 tcaatgattt tattaatttt attgctttgt gcagatgctg ttaactagga cacgttgcac 120
 atgctgattt gtttcgcact actgcattgt agtttttggc tcaacatttg aattcatatg 180
 caatcaagaa ctttatctta gtgtgctaatt ttgtctgtca tgtagtcat aaataataacc 240
 tttagttctt aagagttcat actagatgtt ctctgatctg agtgctgcac tctttcgaac 300
 tatagtgtca agcttgtcga tcaagctctt gcctccggaa agatttacga tggagatggg 360
 ttcaactaca tcaaataatc ttttgaaagt ggtactcttc accttactgg gttgttga 418

<210> 4214
 <211> 442
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F2

<400> 4214

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 agacagcacg aaggctgtgc aggaggcatg ggcacggcg tcgggcggca ctgggaagca 180
 gacaatcctc ataccgaagg gtgacttcct tgtcggacaa ctcaacttca caggcccttg 240
 caagggcgac gtgaccatcc aggtggatgg caatctgctg gcgaccacgg acctaagcca 300
 gtacaaggac catggtaatt ggatcgagat tctacgtgtg gataacctgg tcatcaccgg 360
 caagggaac cttgacgggc aaggcccagc cgtgtggagc aagaactcct ggcacaagaa 420

gtacgactgc aagatccttc cc

442

<210> 4215

<211> 412

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F3

<400> 4215

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cacagcattt ctgttgaact ttgcttttac tacatgatac ttcgaggtgg cattgagacg 180
taggggttggc ttgggaatgt gaacttcacc acatttcctg gtccctgccct gaccctgagg 240
catattgggc ttgcgatacc agggctctag ataagtaaga tatcccactt tgggtattgg 300
ttgttgatgc tcctgccaat ggcagttagc tggatccaac gggaagggtc agcaccagct 360
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<210> 4216

<211> 426

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F4

<400> 4216

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caacaacaag acggccttca ccaaccgcac cgactacggc aaggcgagc gagaggcgca 180
gtgggcccacg gcacagagga cgctgcacgg cctcaaccag gccaccgcca cctccgacct 240
cttcggcgac aaccagggct accgcgagct gtcggagctc gccgagcagg cggccaagcg 300
cgccgaggtg gccaggetca gggagctgca cacgtcaag ggacacgtcg agtccgtcgt 360
caagctcaag ggctcgaca ttgacacat tcagcagagc tacaccgtgt aaactcgact 420
cagttt 426

<210> 4217

<211> 400
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F5

<400> 4217

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tcgtcgtcgt cgtctcgttc tgtggctcgt gatatccgcg caaacaatgc tagttgccgc 120
cgcgcccggc gccaaagcgc aggcgcgcgt gatgttcgtg ttcggcgact cgacgctgga 180
cgtcgggaac aacaacttcc tgtcgggggc ggccgtcccc agggccaaca agccccacta 240
cggcgtcgac ttccccggcg gccatccac cggaaggttc agcaatggcg acaacacggc 300
tgacttcgtc gcgaagagca tgggggtgaa gagtagccct ccgccgtatc tgctcgttgc 360
acccaacggc tccagccctc tgctcgcgca gactgctctc 400

<210> 4218
<211> 389
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F6

<400> 4218

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agaggtgact cctcgatcat gtccagtcac accaccacca tctccagttg agacactagt 120
tccaccatca cagtcacgc caccggaaga agcagttagc tcaacacctc aagcaccagt 180
gtcgtcatct ccacgagctc ctgtacgctc agtacctcca ctgaagtect cgccgcctcg 240
agtagtagag agcgcaccac caccgacaat atagtcacac cttccactgg ctccactgag 300
ctcaccagct catgtatgag aagacttctc gcatgacttg cagcagtgaa ctcagcagct 360
ccgtcatcta cgtcatcagt accagtagc 389

<210> 4219
<211> 409
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F7

<400> 4219

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agtcaagcaa catactgctc tttgaccatg atgttgcgaa gatcggggac ttcgacatct 120

caaaccaggc ccctgacatg gctgcgcgcc tccactctac tcgcgttctt ggcacctttg 180

gctaccatgc accagaatat gccatgactg gacagcttag cacgaagagt gatgtctaca 240

gctttggagt tgtgctgcct ggagctttta accggtcgca agccagttga ccacacactg 300

ccccgtggcc agcagagcct tgtgacatgg gctacaccga ggcttagtga agacaagggtg 360

aggcaatgcg tcgatccaag gctcggagac gaataccctc caaaggctg 409

<210> 4220

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-F8

<400> 4220

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acagccagct cgcgaaaata atgaagagcc gcagcatggc atcatcggcc gcgctcttgg 120

tgctagccct cgcgctagtg gcggacaccg cccacaggt agcggaggca aagaagaaga 180

gagcggcgga gagcggcgag gcggcggagg cgaagaagat ccaggacgac ttctgctcga 240

cgctgtgcga gggcaagaag gggacggacc tggctcgtgtg caaggagtcc tgcgcgctct 300

cccagcagtc caacctggtg ctgtacggca ggatccagtg caagggcaaa tgcaccgagc 360

agaagggcat cacggcgccg gccatgaagg tctgtcagga ggagtgcgac aaggcgtacg 420

tggtgaaggc ggccg 435

<210> 4221

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G10

<400> 4221

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gtcttccatg gctcctcgt agtagaatag ttctatctca ccgcaacaac tcctcattac 120
atcctttatg agaggctgat cgattggtag atacgtactc gggaggagca gagcaacgag 180
agacatggcg acgacgacgc gtgttgccgc cgcgccacc ggcgtgctgc tggctcctgtc 240
ggcgttggcg accctggcgc gggccgagga cccgtacctg ttcttcgagt ggaagggtgac 300
gtacgggatc aagtccctgc tgggcgtgcc ccagaaggtc atcctcatca acggcgagtt 360
ccccggcccc aggatcaact gctcctccaa caacaacatc gtcgtcaacg tcttcaacca 420
gct 423

<210> 4222
<211> 365
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G11

<400> 4222

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ctgaacacac gcatgggtgcg cataggcgag gccaaaggcca ccgcgagggga tcgtgtggtc 120
agctgggatg gcaatgcgat gcacctccgc cgcgctgctc gtgctggcgc tcgtcgccac 180
cgtagtgcgc gcggaggacc cctaccactt cttcgagtgg aacgtgacgt atgggacgaa 240
cagcatcatg gggactccgc agaaccgtga ttctcatcaa tgatctgttc ctcggacgta 300
acatcaactg cacattcaat aacaagatcg tcatcaatgt cttcaatatg ctcgagcaac 360
tgctc 365

<210> 4223
<211> 416
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G12

<400> 4223

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aaggaaaccg aagccccgat gacaagcttc ttcagggacg cgcgcctccc gcagcagcgc 120
gtcgtcgagg gcgtcccctt cccggcggtg ctggtcccga gcgctcgtgc gggctcctgc 180

gcccggcgggg tcgacaagtt cctggcggcc gtgcgctgcg agagggcgtc ccggctggag 240
ccgctggtgc gggacgcggg ggccctgctg ctgcgagggg tccccgcgac gacggccgcc 300
gacttcgacc gcaccgtcga cgccttcggg tacgaggagc tgccaatcgt cggcagcgtc 360
gcgcgcggga ccaacgtcgt gggccgggtg ttcaccgcca acgactcgcc gcccgga 416

<210> 4224

<211> 380

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G2

<400> 4224

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caccaccca tcgaggttgg ggccgccagc aggttcagcc gttcctgttc ttgataaaac 120
gagagaagga tggcagtgtt tcagggagct gtcctagtct tgtttctcct cctcgtcgca 180
tcagatgtgg gaaccatcga tgccaaaatg ggagtagcca tgcacatgca tgccttgata 240
atggagaaaag cgacacagca tgacacggcg aagaacgagg agaatatcac ggataaggaa 300
cagagtcaat gcttatcgcc gagtctccaa ttcgagggct tctgcttcaa cagtgcaga 360
tgcgcccacg tgtgcatgaa 380

<210> 4225

<211> 420

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G3

<400> 4225

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gagctggaga tggaggatgg agaggggaca aggtttccgg ggccgagtcc gagacggacc 120
ccgcgccggc acgatccggt ggatgaagtg catcacacct tgagggacgc cccttgagaca 180
gcagtttgtg ctgcaaattc tatatagctc tgtcgcagca tggcctcggg gggcgtggca 240
cgcgcttctt tgggatttca gaatggcaca agttctagca gtgaccaga tcgtcatccc 300
aacgagttgg gcagtatgag cattccggac gacaaggacg ttgacgatat tgtagtcaat 360

ggcaatgggg cggaacctgg gcatatcata gtgaccagca ttgatgggag aaatgggcaa 420

<210> 4226

<211> 429

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-002-Q1-E1-G4

<400> 4226

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cggaatgata gtggtgaccc cggagttgtt cgggtccgga atcatcccga ggccgcacgc 120

catcccgaag gtgcaagtct ctaacgcggc ggggcagaag atcaaggcct acatccacaa 180

ggcgcggggac ccgacggcga cgttcgtctt caaaggggca gcgttcaaca cccaagggtc 240

gccgatggtg gcgcccttct cctcgcgggg cccgaacagg aggagccgtg ggattctgaa 300

acccgacata atcggccccg ggggtgaacat catcgccggc gtgccctcga tcgangacgt 360

ggacctgctg cgcaacgcgg aggtgcccac gttcgacata aagtccggca cgtccatggc 420

cgcgccgca 429

<210> 4227

<211> 457

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G5

<400> 4227

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ctcgtgcctt ctcttcctcc ctggcatgga ggaagtagct gtttcgccta tgatcgttgc 120

cgccgtagtg ctggacaaca atggcgctga cgcggtctcc tgcactgcca tccctagcgt 180

aacaataagc ctagaggaga aagaaaatat caatggggat gttcccacga tcacctcggc 240

cgcaagcaac gaggaggagg cgttgttcag tgtcggagaa tccaccaagg acgatggcca 300

tcgcttgacg atggaatgct cactcccgt ctctccagt agcccttcca ctgcgaagaa 360

gcgcggggcg ttcagcctct tcagggcgat gttcctgtcc ttcggccgga gcgacgacag 420

catgaagaag acagacgacg acaccacgag cccaag 457

<210> 4228
 <211> 443
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-G6

 <400> 4228

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 ccaaggtgaa cgggtggcaag tctgcggtgg cggtatgtgga gcacgagacc ataaactgtac 120
 ctctgctcggg gccgaggact ttctacaacc agcttcccga ctggagcatg ctcccttgctg 180
 ccatacacaac catctttcttg gccgcccaga agcagtggac gatgcttgac tggaagccca 240
 ggcggcctga catgctcact gacacttttg ggtttggccg gatcatacat gatggggtca 300
 tgttcaggca gaactttctcc attaggtcct atgagattgg ggctgatagg acggcatcta 360
 tagagacaat gatgaaccat ttgcaggaaa cggcacttaa tcatgtgaag accgctgggc 420
 tgccagggtga tggattcggc tcc 443

<210> 4229
 <211> 301
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-G7

 <400> 4229

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 gtgccgcccg cgatcccgat ccgccgaccc gtcccagccc cgctcgcagc catgtcgccg 120
 tcggagccga cgcgggagga gagcgtgtac atggccaagc ttgcggagca ggcggagcgg 180
 tacgaggaga tggtcgagtt catggagcgc gtcgcgcgct acgccggggg cgccggcggc 240
 ggggacgagc tcgcggtgga ggagcgcaac ctgctgtcag tcgcctacac taacgtcagc 300
 g 301

<210> 4230
 <211> 440
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G8

<400> 4230

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ccatcaacaa tcgccgagag cgatcgagag ataaataaag atgaagaaag tggcatcatc 120
gtcagccggtt ctcttcgtgc tagccctgac gctagtttgt gccccgctga tagcagaggc 180
aaagaagaag agagtcgccg ccgccgccgc cgaggagaag aaggtgcagg acaacttctg 240
ctcgacgctg tgcgagggca ggaaggggat ggacctggtg gtgtgcaagg agtcctgcga 300
cctctcacag cgctccaacc tgggtgctgta cggccggatc cagtgcagg gcaagtgcac 360
cgagcagaag ggcatcaccg cgccgcagat gaaggtgtgc caagaggcgt gcgacaacga 420
ctacgtggtc aaggcggctg 440

<210> 4231

<211> 403

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-G9

<400> 4231

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tcgtgaacaa cggggaggtg tccgggatca cgctgctcaa ctccaacttc ttccacatga 180
acatgtacca gtgctgaac atgctgatca ggcacatgac cgtgacggcg cccggggaca 240
tccccaacac ggatggcatc gacatgggcg actcatcagg gatcaccatc atcaacaccg 300
tcattggcgt cggctacgac tgcattctca tcggccctga gacctccaac gtgaacatca 360
ctggcgtgac ctgcggcgcc tgccacagca tcagcatcgg cag 403

<210> 4232

<211> 188

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H1

<400> 4232

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 agcgaatcat gtcgagatat caccatcggc ccaggctctt gcagaaacga ggaaaaaata 120
 catgtcatct cgctgggtta gggcggctgt gtatccgatg ttctcgacga caggggtagt 180
 gctgggga 188

<210> 4233
 <211> 422
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-002-Q1-E1-H11

<400> 4233

ccacgcgtcc gggaggtggc cgtgaagcag ctcaaggccg ggagcgggca gggcgagcgc 60
 gagttccagg ccgaggtgga gatcatcagc cgagtcacc accgccacct cgtctccctc 120
 gtaggctact gtatcgccgg ctctcccag cgcctgcttg tctacgagtt cgtgccaac 180
 aacaccctcg agcaccacct ccacgggaag ggtgtgccg tgatggcctg gccggcgagg 240
 cttgccatcg cctcggctc cgccaagggc ttggcttacc tgcacgaaga ttgccacccc 300
 aggatcatcc accgtgacat caaggcagcc aacatccttc tggacgagaa tttcgaggct 360
 aaggtcncgg gtttcggact ttgccaagct gacacagaca ccaacacgca cgtctccacg 420
 cg 422

<210> 4234
 <211> 430
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-002-Q1-E1-H12

<400> 4234

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 aggcaagagc tgcagacgtc aatccagaat acgaggctgc agggatcgat acctggccag 120
 aagatgaggg agcaatcgta gagtcatcag acgacgcaag gcaactggacg tcagacaacg 180
 ttgcaatgtc caagtctaga atgtcagctc attggtcaga acagatcggc tgcacagaac 240

gctagattga tatcagcaca aagacagctc atccattcct cagaattcaa ggcctctcgt 300
ggagtacaac agtatacagt acaaagaagg atatccagtg atgacagaca agtaatgcat 360
agctatcaca aatttgctgg caacgacgat gaagacgata gtgacatgga aactgatttt 420
gctancatac 430

<210> 4235
<211> 336
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H2

<400> 4235

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aggaggacaa ggaggaggca ctaacagtgg cggcgaaaca tgagccagca ggcatcattg 120
agcctcatca gattgctagt gaggtgacca cttcgggagt ggcggtcgtc gttgtcgaa 180
ctgagaacag agtcgacgag gaagttgtgg agaagaccgt catcgagaag gagatgccat 240
cagcagtcca tgcagacgaa aatattgcca ccatcaaggt ggcaaccgag ccaggacag 300
tattgaagaa cgacaccgtg gaggagatat agatgg 336

<210> 4236
<211> 362
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-002-Q1-E1-H3

<400> 4236

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cgtgtacgcc aactgggagt tctgcaagat gcagggcatc ggctggggct ggggcggcg 180
catctgggcg ttcagcgtcg tcacctactt cccgctgtac gtgctcaagt tcggcatccg 240
ctacgcgctc tccggcaagg cctgggagaa catcagcaac aagacgggct tcaccaggcg 300
taccgactac tgcaaggggg agcgagacgc gcagtgggcc acgggacaaa ggacgctgca 360
cg 362

<210> 4237
 <211> 428
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-H4

 <400> 4237

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ttcattctga tttttgtcag atgttcgaga tggtgacttt ggcagcaaac tatctggcag  120
aagatcagaa tggttactag catcctctat tggaagcaaa tcacacggac cgtgacctaa  180
actaatttaa ctatgaagtg tgaccaatag aggagatata agtgggggtca caatggagga  240
gaccaaagcg gggagatcga agacaaagga ggcctcctgt gcatggtttg tttctgtttt  300
cccctttcga gttcttttctt gcgacaatct tgggtcgcac aaatgggtgt tgtaagtaat  360
gatctgtagc taaaaatgta tgatggggga gtgattgctt ccatacatg ttccttcceg  420
ggctatgt                                         428
  
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<210> 4238
 <211> 396
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-H5

 <400> 4238

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agttgcgcgg catcgcatga acacactgtc acccgacctg tgcaccagaa ctgcggagaa  180
tcacgtcagt aggtataacg tggtagatgc tgtgacggtg ctagaaatgc aagtggacgc  240
ttacaagata cgtgtcaagg ccgttcggat gctcgccaac gatgaggtca aactgcagc  300
gacgcccgac gtgctgatgg agcagaagct ctgcagtacc tactatctgg acgtcgccga  360
caagctcggg acctgcaagc gctccatcag tttccg                                         396
  
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<210> 4239
 <211> 419

<212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-H6

 <400> 4239

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 cactacgaga atatcaagat ggaggactca gccaaaccca ttttcacga catgaagtac 180
 tgcccaaca agttgtgtac tgccaacggc gcctccaagg tcaccgtcaa ggatgtcacc 240
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 aaggtcccat gcaccggcgt caccatggat gacgtcaacg tcgagtatag cgggaccagc 360
 aacaagacca tggctatatg cacgaacgcc aacggcagca ccaatggttg cctcaagga 419

<210> 4240
 <211> 402
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-H7

 <400> 4240

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 agcgtgctgc caaccacgac gtagcacatg caatggcact cgcggccgtg gcgctgccgt 120
 cgtcctcgat cgtcggcctg gtgtctagct gcacggaacc gcagccatgc agacgatctc 180
 gaccgtacgc cgtgtgtagc cggccccggc caccgcccac tgctgccaac tgcccagtga 240
 tgacgacccg gccatgtccg ccgtacgcac ggtcctgcct ctcgatcgta cgcctgagc 300
 aacaggagtt ctgtccggcg ctggaggtcg gtccttgctc tggctagagc tagcccgccc 360
 gccggtcaca cggatcggat ctctccatcc actcccagct gt 402

<210> 4241
 <211> 417
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-002-Q1-E1-H8

 <400> 4241

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 gcggcaccag gcgggtggcg tccgggtgca gggggacctc gcggcgttct acaactgccg 120
 gttcgacgcy ttccaggaca cgctgtacgt gcacgcgcgg cggcagttct tccgcaactg 180
 cgtggtctcc ggcaccatcg acttcattct cggcaactcg gcggcggtgt tccagaactg 240
 cctcatcatc acgcggcggc ccatggacaa ccagcagaac tcggtgactg cgcacgggcy 300
 caccgacccc aacatgaagt ccgggctcgt catccagaac tgccgcctgg tgcccgacca 360
 gaagctgttc ccggaccgct caagatcccc tcgtacctgg gccgcccctg gaaggag 417

<210> 4242
 <211> 386
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A11

<400> 4242

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 tgctagccct cgcgctagtg gcggccaccg cccacaggt agcggaggca aagaagaaga 180
 gagcggcgga gagcggcgag gcggcgagg cgaagaagat ccaggacgac ttctgctcga 240
 cgctgtgcga gggcaagaag gggacggacc tggctgtgtg caaggagtcc tgccgcgtct 300
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 agaagggcat cacggcgccg gccatg 386

<210> 4243
 <211> 410
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A2

<400> 4243

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 tgtgatgaca aaaattgtgg caatgcagat tatgttgatg atcttgatga catttcccaa 120
 gaagatacct gtggtagttc tgatcctggc aatggaattg cggaagataa atttgaggtc 180

aatggatctg ctcaaataaa gcggtccaaaa tttcaaaagg gtgtcttacg tacaaactgt 240
 atagattggt tggatcgac aaatgttgct caatatgcct atggcctagc tgcttttagga 300
 caccagttac atgcacttgg ttctgtagaa tctccagaag ttcattctaga ctctcctttg 360
 tctcgacatt tgatgcattt ttatgaacgc atgggtgaca cacttgcttt 410

<210> 4244
 <211> 398
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A7

<400> 4244

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 ggagggtttc cggataaacg atcatcctgt tccagaggaa gagataaaga tgttgttaca 120
 agcgggcgat atacatggaa ctgacacatt agattgtgag gaatttgtga cagtcttgct 180
 tcacattaaa aagatgagta atgacgagta tctacctaaa gctttcgagt tcttcgacaa 240
 agacgggaat ggttttattg aaatgtccga gttaatggag actctaagt atggtgaact 300
 aaagcctgat gagcaattgg ttaacgacat tattcaagag gttgacaagg ataaggatgg 360
 tcgcatcagt taccagagt ttgaattgat gatgaaaa 398

<210> 4245
 <211> 387
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-A8

<400> 4245

attcccgggc cgaccaagc gtccaccac gcgtcggctc atcccctcg tgtcccgag 60
 cccaggagc ggacgcgggc gggccggcgg gcggccatgg acgtggactg cgtctcgctg 120
 cccgacgcc cggcgggcga cgtggatggc ggcgcgcc gcccgaggcc caaggacgtg 180
 accaacagag gcgccacga gctgctggag tgcccgtgt gcaccaactc catgttccc 240
 ccgatccacc agtgcccaa tggacacacg ctgtgttcca catgcaaggc cagagtacac 300
 aaccgttgcc ctacctgcaa gcaagagctg ggcgacatca agtgccctggc gctggagaaa 360

gtcgccgagt cgatggagct cccctgc

387

<210> 4246

<211> 460

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B10

<400> 4246

attccaggtc gaccacgcgt ccacgccgca agagcacttc gacctcagca tgcccgcgtt 60
cctccagatc ggcgaggaga aggccggcat cgtgcccata tcctatcgca ggggtggcgtg 120
cggaagcag ggcggcatcc ggtacacat caccgggaac aagtacttca acatggtgac 180
gatcaccaac gtggggcggcg ccggcgacat cgcggcggtg tcggtgaagg ggagcaagcg 240
cgtcaagtgg acggagatga aacgcaactg ggggcaagtg tggcagaccg gggaagacct 300
cacctgcgag tcgctgacgt tccgggtgat gactagcgac caccgcaagg ccacctcatg 360
gcacgttctc cccgctgact gggagttcgg cgtcacgtac caggcgtcca agaacttcta 420
agtagccact ttccctcctc ttcttcaacc tgcattgccg 460

<210> 4247

<211> 397

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-003-Q1-E1-B2

<400> 4247

ttgcacctcc ctatagttag tcgtattacg tgnccggccg cgngagcttc gccgacggca 60
tcaccacat gtgcacagcc accttctccg tcgaagcgte cgggttcata tgcattgaaca 120
tggggttcca caacacggac ggcgcggagc ggcacatgc ggtggcgctc cgggtgcagg 180
gggacctcgc ggtgtttctac aactgccggt tcgacgcgtt ccaggacacg ctgtacgtgc 240
acgcacggcg gcagttcttc cgcaactgcc tgggtctccg taccatcgac ttcatcttcg 300
gcaactcggc ggcggtgttc cagaactgcc tcatcatcac cctgcgtgcc atcgtcaacc 360
agcagaactc ggtgcacatg cacgggcgca ccgaccc 397

<210> 4248
 <211> 390
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B4

<400> 4248

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ggtcgacgca cgcgtccacc tgtacctcga ccacctcaac gagcttctgc tccgacgacg   60
acgacgcgcc gccacagcca catggcggac gacgccgtcg ccgccggagc ggccgtttgc  120
tgcgcagggc cggcctcgct gtcttctagc aggaagcagc agcagcagcc cgacgacgcc  180
ggctgcggca gcagcagcag cgacgaccac taccagcagc acgtgatcat gctgaggcgg  240
acgaggagcg ggccgggcatt cccgccgccg atctccgtga tcggcaaggg cgggcgggccg  300
tggtcttgcc tgcggggcgca ccgcgagggg ggacgcctcg tgctgcggca gatgcgcctg  360
ccgtcgcagg agctgctgca gccctgcaag                                     390
  
```

<210> 4249
 <211> 257
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-003-Q1-E1-B5

<400> 4249

```

ccgggccgac ccacgcgtca acctggatct aacccctacg aagcggacga ggatagccat   60
tgccgaaatg cagcggggcc ctctccggcg gtctctgccg gctgggtcgg ngcaagacgc  120
ccgatctgtt ggtgctccgc gaaacccaac atttggcggg cccctacctt gatgttggtg  180
gaatcctgaa caacgaaagc tcctgtcccg gttccccggg ggtcctaaca acttcgctcg  240
gtccgctcca atgcccc                                     257
  
```

<210> 4250
 <211> 369
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B6

<400> 4250

ccacgcgtcc agcagagggga gagattggag ggaggccccct gccaaggca agagaaaccg 60
 cggcgcgcg agagggagga agggcagacg cagacgcaga cgggcgaaca agatgagggga 120
 gatcatcagc atccacatcg gccaggcccg gatccaggtc ggcaacgcct gctgggagct 180
 ctactgcctc gagcaaggca tcgagcacga tggcaccatg cccagtgatt cctcggttgg 240
 cgtcgcacat gatgccttca acacgttctt cagcgagact ggttccggca agcatgtgcc 300
 cagggccatc ttctgagacc ttgagccac tgtcatcgac gaggttcgca ctggctcgta 360
 ccgccagct 369

<210> 4251
 <211> 411
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B7

<400> 4251

attcccgggc cgacccacgc gtcaaaagca cctcctcttc ccccgccggg caacaactca 60
 gccgccgcaa ccgccacatc agccatgggc gcctgcgcaa ccaagcccaa gacgcttgag 120
 gggcaggccc cagctgaggg cgccgtctcc acacccaagg ttgcgcccga ggccactcca 180
 atctccgttg aggttgcggc tgatgaacag gtagctgaga aggtggtggt ggaggagccg 240
 gctgcggcgg ccgacgttga gcatcagaag gctaattgagg tgctcgctcc agaggcggcc 300
 gtcgccgagc ccgaccacaa ggaggaggaa gccgtggaga agaccgtcgt cgaggaggag 360
 aagccagcgg cagcagccca tgcagaggaa aaggtcgcca ccgccgccga g 411

<210> 4252
 <211> 213
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-B8

<400> 4252

aacacctata gtgagtcgta ttaaccggga ggccactggc taaggcaaca caaaccgcag 60
 atcaccgata tgcacgtacg gcagccaccg aagcacacgg gcggagaacg actcggatat 120
 catcagcatc cacatcggca aggccggggt ccaggccagc acatcctgcg tggaggtcga 180

ctgcctcgag cagggcatcg agcacgatgg gtc

213

<210> 4253

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C1

<400> 4253

cacgcgtcca cgggtaagag ggctcgctta caaccccacc ctgcactcaa ggagtgcctt 60

ggactatcat gagcaaggta gcagatgcat ccaaggagga gatccactcc atcgagtcgg 120

tgaaggaggc aaatgcacgg cgggctcaga aaatcaacag ccgcgttggt cgctactaca 180

aagcagcagg agccacagaa ggcgcggcgc cggcgccggc gccagaagca acctgatcga 240

ggagaacgtt agaacagtag ctcaccctcc cgagagtatg gggtgaaaat ctttggcgaa 300

ttgatgtctc gatgcaaatt aaacaggcat gccatctttg tgtaaacaga aattttacac 360

actaagttcc actccctata ctactaccat aatttttagta atgtaaatac tttgaaagaa 420

tgcttaaata taa 433

<210> 4254

<211> 390

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-003-Q1-E1-C4

<400> 4254

gacgcacgcg tctaaagaga ttcgctatat cttggatcga attagacgac ttcttcgtcc 60

ctctcttcat tagcacgcta acttgtaatc tgcaggatct aagcaaagac ttgatttagt 120

tatggacgga ttggtaggcc tcttgaaagt tcgcgtggtc cggggtatca accttgcccta 180

ccgcgacgca agaggcagcg atccaaactg aagacaagcg tgaagaagag atccgtgaac 240

cccatatggc aagaggagct aactctgacc gtcacagatc ccagccaacc actgaagctg 300

gaggtgttcg acaaggacac cttcagcaga gacgaccca tgggagacgc ggaggtggac 360

gtggcgccac tgatggaggc ggtgagcatg 390

<210> 4255
 <211> 334
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-003-Q1-E1-C7

<400> 4255

ggtaacgggc cagaattccc gggccgaccc acgcgtccac ggaacgctgg gttcacttcc 60
 tcgctggccc ataaatatat atctatctat cgccatcgag caattataat ctcacagaat 120
 aataaacatc atggggcaag cctcacggct cgctcctcctc gccgtcgtgg cgctgctgtc 180
 cgccggcctc ctcccgccag cgctgggtaa gggtangggg ggcaggggac acggtggcgc 240
 cgtaaccccg caggctgcgc gcactctgtc tcggcacccg ttcccggaag ttttcacgtt 300
 caacggcggg ccggaagcgt tcaagttacc ggtc 334

<210> 4256
 <211> 426
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D8

<400> 4256

ggtctagaat tcccgggccc acccacgcgt ccaagccccg tccagcccc aactccagca 60
 ctccagaagc tccccctgat ccgacgtcgt ggtggccgac ggctggatcc ctccaccccc 120
 gcgcgcagat gcccctcgcg ccgcggctcct cctcgctcggc gaaccggcac aggggaagcac 180
 caccgcctcc gacgcctaga aattctggag cgtagcaggg taccgtaccg cgcgtcggcg 240
 agctctgttt gcggcgtttg gtactgaaga tgaagaagtc cgactgatgg tttcttataa 300
 taatatgcat ccaagacatc gtacgttaca gtctcccatg atctgtgtat gtaacgtgga 360
 tatacaattg aatatgtgga ggactgtgcg acatgcgttg aagtcggagg gaggattgta 420
 tgctgt 426

<210> 4257
 <211> 429
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-D9

<400> 4257

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gaagtaacac ttctccgtga ggctgagcc cctcgccgcg gtgagccaag cgggcgcacg 120
tcgccccggg gctcacgctc accaccgagc cccaaccaat taataatata tatatatagc 180
taggatcgat cgtcagtaaa atggcaggct ccgcgcgtcct gaggagcccc ctgtccgtcc 240
tcctctacat cctcgccgcc gtgcccgcc cgcgcgcggc gacgccgacc gacgccgcc 300
tcgacgaggc gtacgcgcat ctcgtcaacc tcaccgctaa ccaggagtac tgggcggagc 360
gcgcggaggc ggcgcacgcg tacaaccgcg cggcgtagca gaccgacccc gtggccgctc 420
tgcagcgct 429

<210> 4258

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E10

<400> 4258

ggtctagacc tcccgggtcg acccacgcgt caagtaggtg cattgcttcg gtgggtccacc 60
atggcgcagc gagcgggtggc cagatgacg actaataagc cctcctcct cctcgccctg 120
gcgtccgcgc tccttgggtgc ggcgcgggcc gccgcgaacg cgcgcggcgg ggcgttcagc 180
aactgggtgg cgatgaacca gcagagctac gcgctgtacg cgcagaagtc cgtcggggac 240
gggggcaagg agcccctgga caagaagctg tcggaggcgg acaagaagaa ggtcacgtac 300
gtggtggacc ccagcggcaa cggcgactac accagcatca ccgcggcgct ggaggatatc 360
ccggtgagca acaccaagcg cgtgatcctg gatctcaagc gggcgctca gttccgccag 420
aagctgttcc tgaacatcag caagccgttc atc 453

<210> 4259

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E11

<400> 4259

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aggcgacccc ggcgcggctg gcggagctgt tcgtgaacat cgcggccgag aagggatccg 120

ggatggccac gttcgtgcac gggaagtaca acaacgcca ggacagcacc gtgttcaagt 180

gctacgacag ctgctcggac gacgtcgagg aggccgtcgc ccacctcaac ggctcgtcc 240

gggagcccac cgacgccaag ttcctggagc tcaagtcgtg gctctcctcc acgctcggcg 300

gcacctccac ctgcgaggac gcttgaagg acctgcccga gaacggcgac aaggacgacg 360

tcgtcaactt cagcctcgac ttcgagaagc tgcagcgcgt cagctggac ctcacaccg 420

aggcatccgg attcatgttc gcaggcatcg cctgc 456

<210> 4260

<211> 449

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-008-Q1-E1-E4

<400> 4260

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atgaagagcc gcagcatggc atcatcggcc gcgctcttgg tgctagccct cgcgctagt 120

gcggccaccg cccacaggt agcggaggca aagaagaaga gagcggcgga gagcggcgag 180

gcggcgagg cgaagaagat ccaggacgac ttctgctcga cgctgtgcga gggcaagaag 240

gggacggacc tggtcgtgtg caaggagtcc tgcgcgtct cncagcagtc caacctggtg 300

ctgtacggca ggatccagt caagggcaag tgcaccgaac aagaaggcat cncgcgccg 360

gccatgaagg tctgccanga ggagtgcgac aaggcgtacg tggatgaaggc ggccgaggtc 420

accaaggcct gcagcgtcac ctgcgcca 449

<210> 4261

<211> 436

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E6

<400> 4261

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acgatgacga ctaataagcc cctcctcctc ctgcacctgg cgtcgcgcgt ccttggtgcg 120
gcgccggccg ccgcgaacgc gcccggcggg gcgttcagca actgggtggc gatgaaccag 180
cagagctacg cgctgtacgc gcagaagtcc gtcggggacg ggggcaagga gccctggac 240
aagaagctgt cggaggcgga gaagaagaag gtcacgtacg tgggtggacc cagcggcaag 300
ggcgactaca ccaacatcac cgcggcgctg gaggatatcc cggtgagcaa caccaagcgc 360
gtgatcctgg atctcaagcc cggcgctcag ttccgcgaga agctgttctt gaacatcagc 420
aagccgttca tcacgt 436

<210> 4262
<211> 375
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E7

<400> 4262

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taatgttatt cgttacttcc ctactcaggc tttgaacttt gcatttaagg actacttcaa 120
gaggttggtc aacttcaaga aggataggga tggctattgg aagtggtttg ctggcaacct 180
ggcctctggt ggtgctgctg gtgcttctc tttgtttttt gtgtactccc tggactacgc 240
gagaacaagg ttggctaata acgcgaaggc tgccaaggga ggaggtgaaa ggcagttcaa 300
tgggcttgct catgtctacc gcaggacact caagtctgat ggtattgctg gggctttacc 360
gtggatttaa catct 375

<210> 4263
<211> 433
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-E8

<400> 4263

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tgagggcacc gcctgttgac acccttgccg atgacctgca cacctctgac tgctgcatg 120

agctccggcc cggcgaccac atcgagattc agtggagaag gaacaaagaa ttcccatacg 180
gctggtggta tggagttggt gggcacttgg agtcatgtga tggaagcgaa cacttttgtc 240
ggtgccatct tagtgatacc gtggtgctgg agtttaatca gtacacgccg ggctcaaggt 300
ggaggcaagc gttggtgaag cggaaggagc ataaggagga gggcaacgag ggcgacgggt 360
tctacggcgg cataaggaag ctccgcgga aggatgacat ctccaagtgg aggcagctgt 420
ggccaacaga cgt 433

<210> 4264
<211> 460
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-E9
<400> 4264

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acgatcgaac gagcacaggc acgcacgcac catggcccg cgtctcgccc tcgcctcctt 120
cctcctcgtc gcctccgcca ccgtggcttt cgccgaggag gcccggcgag cctcgccgaa 180
gcattcgccc tccacgccgt caaaggcgcc cagcagttcg cccgacaagt ccgagaaggc 240
ccccacggcg tcgggtgaga atgctgcaga gacgccgaag gcaaccccg ccaaggcccc 300
ggcggcgccc tccaagtcag aggcacgcc ttccgaggcg cccgactccg ggtccagcgc 360
tgcgtcacct actagcgaga ggcgcgcgtc agagaaggcc cccgccggtg cccccaagga 420
ctcgtcggcc agcccttcg cgtcnccgtc cgaagatgaa 460

<210> 4265
<211> 412
<212> DNA
<213> Zea mays
<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-F1
<400> 4265

tacggctcca gaattccaag gtcgaccac gcgtccagtc gtcgagccca tcctgctcga 60
ggtcgaccag atctaccacc tcgcctgccc cgcgtcnccc gtccactaca aatacaacct 120

catcaaaaca atcaagacca atgtggttgg gactctgaac atgcttggat tggcaaagag 180
 gatcaatgct aggttcctcc tcaccagtac cagtgaggtc tatggtgata ccctccagca 240
 cccgcaggtg gagacttact ggggcaatgt caatcccatc ggtgtcagga gctgttacga 300
 tgagggcaag cgtacagccg aaacgttgac catggattac caccgtgggtg ccaaccttga 360
 ggtaggatac gcacgtatct tcaacacata tggccctcgc atgtgcattg ac 412

<210> 4266
 <211> 220
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F10

<400> 4266
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 aaataataac agaaagggtc cgcccttttc ctccgacatc cacatggggg gaggggaaaa 120
 cacttacatt caccggggcg aactaatggc ctccgttcgg gctccggcga ctacaaccgc 180
 cgccgtcatc ctatgcctat gcgtcgtcct ctctgtgcc 220

<210> 4267
 <211> 445
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F11

<400> 4267
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 ccgttgatcc atcttgctaa taagcctgcg tgcccttcgt tcttctcgt ctcgatcccg 120
 acgacgctcc gttcgggtcc ggcaaaccac atcaagtgc gatggagatg aagaagggtc 180
 cctgcgccgt cctcgccgcc gccgcctcgg ccaccgtggt cctcgccgcc gagggccccg 240
 cgcccgcccc caccagcgcc tcctcgcccg cgttcccggc cgtcggcgcc gtgctgggcg 300
 cctccgtgct ctcttcttc gctactacc tgcagtaaaa ttaaaggagg atcggaggga 360
 gaggtgctg gctgccattg cctgtattcg gttggattcc gtttatatat atatttaagt 420
 accttaattt gggctctgaac atgtc 445

<210> 4268
 <211> 437
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F12

<400> 4268

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accggtctag aattcccggg ccgaccacg cgtccatccg atccatcaac aatcgccgag   60
agcgatcgag agataaataa agatgaagaa agtggcatca tcgtcagccg ttctcttcgt  120
gctagccctg acgctagttt gtgccccgct gatagcagag gcaaagaaga agagagtcgc  180
cgccgccgcc gccgaggaga agaaggtgca ggataacttc tgctcgacgc tgtgcgaggg  240
caggaagggg atggacctgg tgggtgtgcaa ggagtcctgc gacctctcac agcgctccaa  300
cctggtgctg tacggccgga tccagtgcaa gggcaagtgc accgagcaga agggcatcac  360
cgcgccgcaa gatgaagtgt gccaagaggc gtgcgacaaa gactacgtgg tcaaggcggc  420
tgaaggtcac aaggcct                                         437
```

<210> 4269
 <211> 449
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F2

<400> 4269

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attcctaggt cgacccgccc gtccacggcg ttcaccgagt tcaagaccga tgacatggcc   60
aacatcatga aggacttcga cgagccaggg cacctcgcgc cgacatgcct gttcctcggg  120
cctaacaagt acatgggtcat ccaacgcgag cctggtgccg tcatccgtgg caagaatgga  180
tcaggaagca tcaccgtgaa gaagacaggg catgcactcg tggttggtat ctacgatgag  240
ccgatgacgc ctgcgcagtg caccatggtg gtggaaaagc tgtgcgacta cctggcttaa  300
caagggatgt aactactacg tagcagctgg catgcatgtc gacgaccatg gttttcaatt  360
tcgacttcca ataatactga caacaaagca ataggcttcc tcccggcgta attgctttgg  420
ctcttctcct ccacgcgata ggatatcta                                         449
```

<210> 4270
<211> 455
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F3

<400> 4270

tacgggtcaa gaattccaag gccgaccac gcgtccacta tcaccattaa ttcattcctct 60
gaccaaaggc tacatgggtcc tctaccgcaa ctattttctgc aaacatcgag ctgatctcgg 120
agccccggagc tgcaatctga caacagtgcg tgtcgcaaca ggagatcggg tcaccggaat 180
cgatagaaaag gacgattaga ctatgggtgcc ccgaattacc aatcgaatta cacgccacag 240
atcgcggtctt gggatttggg acgtccccaa atcagaacct cggacttagc ggcacagggc 300
cagggatgaa aacgggtcgga aacgggtattt attcggtaat cagttttttta gtcgtttttc 360
tttgattgcg aataaataga atatagaatc tatcatacaa atttgtattc ctgttttttaa 420
cattcagttt gtaaagattc ataaaagata aacct 455

<210> 4271
<211> 286
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F4

<400> 4271

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gccacagcag ccaattcaga actgaagtcc tgtcaaaatg ttgggtattg gtactgctcc 120
aactgctcgg caggagaatg caaccccggt ggtcaccagc cttccgtatt tcttaatttg 180
tggttaacag taaaaacttt gttgtattgc gtatcaacgt ttgaagaaaa accgtgagat 240
ataccgatg taaaaaaaaa aaaaaaaggc gggccgctcc agagga 286

<210> 4272
<211> 448
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F5

<400> 4272

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 cagcggcggt cagggcggac cggcgatgct gacgaccgc aaggaggtca tggcggcagg 180
 ggtgaagggtg ctctggcggg cggcggagca gagcgctcag ctctcgctct acttcgacct 240
 gtgccgcgag ctcggcgtgg ccaacgcgcg caagctccc acatcattag ttcgcttgaa 300
 agacgacgac gtccgggacc tcgagcggat cctcatgagt gagagtgaca tccagaacga 360
 aagcgggtgag gaggcggagg cggaggcaga ggcagaggca gagggggcgg cggacgtgaa 420
 ggacgcgggg tcaacgtcga cgaacact 448

<210> 4273
 <211> 68
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-F6

 <400> 4273

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 ggctgtcc 68

<210> 4274
 <211> 461
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-F8

 <400> 4274

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 tgtataaaag attaagggaa gccacacaa gtatttgag cagcgtgcaa ttcattcctt 180
 ggagaccttg gacagcaatt actgggggcc ttgactcaa gctggctgca tgggatttct 240
 ccaaaggacg aacactgttt tctattgatt atggatcacc tgaattgcaa aacggcagtt 300
 cttccggtag tgcagggcaa tgtttcaacc ctgcttttgt tcattccgta gcagtttctg 360
 aagaggatat tttgggaggg ctctacaagg tttgtgctgt tgcaaggggg gatgggtgctg 420

ttgatgtggt tgatcttgag tatgaactgg cccctgcgaa a 461

<210> 4275
<211> 452
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-F9

<400> 4275

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ttgttggcga ccctgctcag cgtcggcgac gcgttggtcg tcgacggcct gcaggtgggg 180
ttctatggaa agacgtgccc ggcgggccgaa ggcgtcatca ggcacatcgt caacaacgaa 240
atcgctatgg accgggggat ctcccttggc ctcattegcc tcttcttcca cgactgcttc 300
atcacgggtt gcgacgcttc cattctcctg gacgagtcgc ccgcggcgga cgtcccagag 360
aaggagtcgt ccgccaacgg cttcaccttg gtcgggctca gaaccatcga catcgccaag 420
tccaccgtag agggcatgtg ccccggaag gt 452

<210> 4276
<211> 431
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G1

<400> 4276

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aatgaacctc agtcaagcc tcaactccgtt tcggtttcaa caaatctcc aaaactgagc 180
atgattcccg gtggtctgcc tcatggaaat gggctgctca cagcaagcac tacaccacta 240
aggatcatatc ggcagtcata gtcgtggccg ccggtgtcgg gatttgtact gtcacggatg 300
tcgaggtcaa tgccaagggg ttcactctgcg cttgcgtggc agtggtctgc acgtcgcttc 360
aacagattac aattggctcc tttcagaaga agtacaacat tggatcattt gagctgctga 420
gcaaaactgc g 431

<210> 4277
 <211> 459
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-G10

 <400> 4277

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tcgagcacct caacgagctt ctgctccgac gacgacgacg tgccgccaca tccacatggc  120
ggacgacgcc gtgcgcggcg ggcgggccgt tcgctgcgca gggccggcgc cggcctcgct  180
gtcttctagc aggaagcagc atcagcagcc cgacgacgcc ggctgcggca gcagcgacga  240
ccactaccag cagcagctga taatgctgag gcggtcgagg agcggggcggg cgttcgcgcc  300
gccgatctcc gtgatcgga agggcggggcg gccgtggctc tgccctgcggg cgcaccgcga  360
gggtggacgc ctgctgctgc ggcatatgcg cctgccgtcg catgagctgc tgcagccctg  420
caaggaggac ggcaggttca agctcctcat gcacccggg                               459
  
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<210> 4278
 <211> 333
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-008-Q1-E1-G11

 <400> 4278

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aaattgtata gaatgaaca ctggtctcca catttccctc tatggtgtaa tatagagaac  120
tccacgacgc tatacatggt gtgccaccaa ttaaccggag ttaattagta gcaagaagga  180
ttaattagcg ccgtgcatgc atccatgcgg cgatgggctg gccagtaata attataatta  240
aggagaagac acgaagcgta tagtacgttt aatcatttaa gccgacttgt tgcggttgtg  300
gtgctccggc ttgccggcgg ccgctctaga gga                               333
  
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<210> 4279
 <211> 438
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
<223> Clone ID: LIB148-008-Q1-E1-G2

<400> 4279

gcgtccgatt cttctcacga tccatcaaca atcgccgaga gcgatcgaga gataaataaa 60
gatgaagaaa gtggcatcat cgtcagccgt tctcttcgtg ctagccctga cgctagtgtg 120
tgccccgctg atagcagagg caaagaagaa gagagtcgcc gccgccgccg ccgaggagaa 180
gaaggtgcac gacaacttct gctcgacgct gtgcgaaggc acgaagggga tggacctgnt 240
ggtgtgcaag gagtcctgcg acctctcaca gcgctccaac ctggtgctgt acggccggat 300
tcagtgcagg ggcaagtgca ccgagcagaa ggggatcacc gcgccgcaga tgaaggtgtg 360
ccaagaggcg tgcgacaagg actacgtggt caaggcggct ganggtcaca aggcctgcaa 420
caacacctgc gccaaagga 438

<210> 4280

<211> 470

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G4

<400> 4280

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gatgggggttc caaaacaccg gcggcgccga aaagcaccag gcggtggcgc tgctggtgca 120
gtccgacaag tccatcttcc tcaactgcaa gatggacggg ttccaggaca cgctgtacgc 180
gcactccaaa gcgcagttct accgcaactg catcatctca ggcactgtgg acttcatctt 240
cggcgacgcg gcggcggtgt tccagaactg catcctgggtg ctgcgccgcc cgatggacaa 300
ccagcagaac atcgcgaccg cgcaaggccg cgcggacgcg cgccaagcac cgggttcgtg 360
ctccagaagt gcgagttcca ggccaagcc gcgctccggg actccgggcy cccgcccatc 420
cgcaactacc tgggcccggc gtggcgcgag tgctcgcgca ccacgtcat 470

<210> 4281

<211> 440

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G5

<400> 4281

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catccgctcc acaggatcct ctgcgccacc gcaaccgtgt gaccgcccgt gccgcccggc 120
atcccgatcc gccgacccgt cccagccccg ctgcagcca tgtcgcgctc ggagccgacg 180
cgggaggaga gcgtgtacat ggccaagctt gcggagcagg cggagcggta cgaggagatg 240
gtcagattca tggagcgcgt cgcgcgctac gccgggggcg ccggcggcgg ggaggagctc 300
tcggtggagg agcgaacct gctgtccgtc gcctacaaga acgtcatcgg cgcgcgcagg 360
gcctcgtggc ggatcatctc ctccatcgag caaatgagg aaggccgcgg gaacgaggcg 420
cacgccgcat ccatccgcgc 440

<210> 4282

<211> 462

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G6

<400> 4282

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aacaatacct ctctagctcg ccaccaacaa tggcctctag gttctccatc atgctcgcca 120
caacggcact ggctacgttt tttgtgattg gttcgtgcac caccocgctc accttcaagg 180
tcggcaaagg ctccaagcct ggccacctgg tcctcaccoc caacattgcc accatctccg 240
aagtggagat caaggagcac ggtggcgatg acttctcctt tgagctcaag gagggcccg 300
ccggcacctg gacgcttgac acaaaggccc cactcaagta cccctctgc atccgctttg 360
ccatcaagtc tggcggctac cgcacgcgg atgatgtcat cctgaaaat ttaaggccg 420
acaccaccta caagaccacc ctcagcatct gatcatcctc tt 462

<210> 4283

<211> 435

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G7

<400> 4283

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caggatgtcg tggcagacat acgcgatga gcacctcatg tgcgagatcg agggccacca 120

cctgacctcc gctgccatag tcggccacga cggcgccgtt tgggcccaga gcaccgcatt 180

cccacagttc aagacagagg agatgaccaa catcatgaag gacttcgacg agcccgggtt 240

cctggccccg accggcctct tcctcgcccc caccaagtac atgggtcatcc aaggcgagcc 300

cggcgctgtc atccgcggga agaagggatc tggaggcata actgtgaaga agacagggca 360

agcgatggtg gtcggcatct acgacgagcc catgaccccc ggccagtgca acatggtggt 420

cgagaggctc ggcga 435

<210> 4284

<211> 453

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-G9

<400> 4284

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gccgctcctc ttcacatggc acgggatcca gcagaggaag aactcgtggc aggacggcat 120

gccgggcacc atgtgcccga tccagcccaa caccaacttc acgtaccact ggcagcccaa 180

ggaccagatc ggcagcttct tctactacct cagcaccggc atgcagcggg cggcgggcgc 240

ctacgggctg atcagcgtcc acagccgtga cctgatcccc gtgcccttcg acacgccggc 300

cgacgacttc ccggtgctca tcggcgactg gtacaccaag gaccacgccg tgctggccaa 360

gaacctggac gccggcaagg ggatcggggc gccggcgggg ctggtgatca acggcaagaa 420

cgagaaggac gcgtcgaacc cgcccatgta caa 453

<210> 4285

<211> 451

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-008-Q1-E1-H11

<400> 4285

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 cagaggggccc tcacctgggtc cgctcgccgt tgtgtccatt cggggcaaac acagagacct 120
 cgggagcctg ccgcacctcc atcgagcggg acggaagaat ggtgggagaa cagagaaact 180
 ccaccgccat ggcccggcgc cgcgcctcct ctggtgcact ggtaccgctg ccatgtgccg 240
 tgcagtgcgt tgggtgggatc ctgtcgctgt ggtgggaatc cagcggccct gggtaattcg 300
 ggtgtgcgcc cacatttggc ctcggtgacc agctacagga ttccgccgac atctccagt 360
 caaatcatgt ggtcattccg ggtggattga tgccggggga ccctgggatt gttcaccgga 420
 aaatctacac agcggcaaag cgactctgag c 451

<210> 4286
 <211> 456
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-H2

 <400> 4286

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 cgctcgggcg gtggtcctcc gtgtggtcgc caacgtcaac cgctccggca agaaaggcgg 120
 cgacaacttc acggtcccgg gggaagcttc ccttgccacg tccggcaagt cgggtcaagtc 180
 cctgtgcgcy cccaacctat acaaggagtc ctgcgaaaag aactgtccc aagccaacaa 240
 tgggaacgag aaaccaagg aagtgttcca cagcgtgggc aaagtggcgc tggaatccgt 300
 ccagacgggg tccaacagtc caagtcgatc ggcgaggcca agggcagcga ctccatgacc 360
 ganagcgcgc gcgaggactg caagaagctc ctggaggacg ccgccgacga cctgaggggc 420
 atgctcgaga tggccggcgg cgacatcaag gtgctg 456

<210> 4287
 <211> 400
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-008-Q1-E1-H3

 <400> 4287

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 caaaccatc aaccatggcg aactccgct cgggatggg cgtagcgac gaatgcaagc 120
 tcaagttcca agagctcaag tcgaagcgaa gcttccgggt caacaagttc aagattaacg 180
 aacaaacgca acaagtgggt ggggacaagc ttggggaacc gggcgaaaac tacgacgaac 240
 ttcacggctc catgcccga aagcagtggt gctacgccgt cttagatttc gactttcaca 300
 ccgacgataa ctgccagaag agcaggatct tggatcatct ctgggtcccg gacacctcga 360
 gggtcangag caagatgctg tacgagagct ccaaaggacg 400

<210> 4288
 <211> 456
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-008-Q1-E1-H5
 <400> 4288

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 tctcccggtt ccaagcctcc atccaattgg atagtcgctt cgtgcgggtcc cgtcccctcg 120
 ccggccggcg gagctcacgg cttgccgctg cattgccatc gtgtcacttg tacacaatcc 180
 accaatctga ttggattcgg ggggatgctt gggcaaattc gagaatttgc tcaggcattc 240
 gttccgattg cggctagcta gctgatcgt taatcactcg acacgggcaa atttgcacgg 300
 cgacgacgat gggcatcttg tgttgtttcc agtccacac cagcgatcac gctgttgcct 360
 cgtccccggc tacctcttcg tctctgccc cctcgtcgtg ccgaaacaac gatcgccgtg 420
 ctcccccca gcggcaggcc cccggcgagg agaaga 456

<210> 4289
 <211> 436
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-008-Q1-E1-H9
 <400> 4289

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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaataa aaaaaaaaaa 120

aaacaaaaaa aaaaaataat aaaagggggg gcccccccaa aggttctaata tttattttcc 180
 tttcaatgca atttcttctc ttttcaaaag tttcccaaata tttcatttaa ggggcttttt 240
 ttttaaaact ttttaagggg aaaacccttg ggtttcccaa tttttacccc ttttaaaaaa 300
 atccccctttt cccaacttgg tttaaaccta aaaggcccca cccctttttcc ctttcctaaa 360
 attttccaac cttaaagggc atttgtgacc ctctttttta ggcgacttaa actccgttgg 420
 ttttgggatt ttcccc 436

<210> 4290
 <211> 407
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-A1
 <400> 4290

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 agacaagatc tgcgccatgg cggcaacgac gacggggatg cagatgatgc acgcggcggc 180
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 cgcatgtac agagaactcg ggatcagaac cttacgtacc tcggctgtat tagctaaagc 360
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<210> 4291
 <211> 450
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-A10
 <400> 4291

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 gccagcttgc tcgcgcgcgc cgtccttctt cctcgccctcc gttccattcc gtcccgcct 120
 ccaccgccgc cgccgcattc agggatggag atgaagaaga tcgcctgcgc cgtcctcgtc 180
 gccgcctcgg cggccaccgt ggcgctcgcc gcggaggctc cggctccggc ccccaccagc 240

ggctcctccg ccgtcgcgcc cgccgtcggc gccgccctcg gggccgccgt cgcctccttc 300
 ttgcctact acattcagtg agccggccgg ggcccccga ggccgaggaa gagacgacgg 360
 ggagagagag tgacatggct gcgcgcattc cgatgcgtgg gcatgttttt tgattcgaca 420
 caccttttgt cctctttttc attgttcctt 450

<210> 4292
 <211> 438
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-A2
 <400> 4292

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 catacgaca gcgatgcacc agcacgagat actagccatc atgcgcctgt cgtccctcct 120
 cctcgtcgtg gccgccctct cgccgcgcgc cgccgcgcag caggtgccgc cgggtgggcgg 180
 cagcgtcttg aagccggact actacagcca gtcgtgcccg cgccgcggaga ggatcatcgc 240
 ggaggtgatg cagacgaagc agatggcgaa cccgacgacg gccgcgggca tgctgcgcgt 300
 cttcttccac gactgcttcg tcaccgggtg cgacgcgtcg gtgctgatcg cgtccacca 360
 gttccagaag tcggagcagc acgcggagat caaccactcg ctccccgggg acgccttcga 420
 cgccgtggtg cgccgcaa 438

<210> 4293
 <211> 397
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-A4
 <400> 4293

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 acatgctgtt tgcgagggtc tcttacagcg ctcaaaaccg tactttcatc ttactgcaca 180
 tctttaatga agatctagac ttctcatcgg aacttcgtt cacctctcca aactcacgt 240
 ctctaataac atgactcctg aaccggtaat cgagcagtag gctccgctac cccggagggc 300

cagacaacgt cccgacccac ccttacttct cagctctaac atgggacatg atcacgtctg 360
 tgtgcacacc accttaaagt tctccttatg gtgatca 397

<210> 4294
 <211> 311
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-A5
 <400> 4294

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 cggacgccgt tcaaggcca gaaccgcaag gagacgttcc ggaacgtgct gcagcaggag 180
 ctcgagttcc cgggggacac ccggtggcgg acgccggagc tcgcggatct catctcgggc 240
 ctgctggagc gggacccgaa gaagaagctc ggttacgccg gcggcgccga cgaagtccgg 300
 gcccaaccgt t 311

<210> 4295
 <211> 407
 <212> DNA
 <213> Zea mays
 <223> Clone ID: LIB148-009-Q1-E1-A7
 <400> 4295

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 aataccagct taccaacaac agcagcagca agccacccg ttgcagaca tggcccgcc 120
 cggcgccggc gccgtgttgg cgctcctagt ggcggtcgcg gcggtggcgg cgttcctcgc 180
 ggtgccggcc tcggcgaagt ccggggagct gagcgcgatg gggttgctgg cggcgaaggg 240
 cggcagcggc gcgggcccgc agaagtgtc gggcgcggtg ggcgagtgcg acgtggacga 300
 ggcggaggag ctcgggctga gcggcgcgcg cctcagctcc gacgacggcg tcggcgggac 360
 gctggcgag cggaagccga ccaaccgta catcagctac gcggcgc 407

<210> 4296
 <211> 463
 <212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-009-Q1-E1-A8

<400> 4296

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aaaaatacca gcttaccac aacagcagca gcaagccac ccgttcgacg acatggcccc 120

cctcgggccc ggcgcggtgt tggcgctcct agtggcggtc gcggcggtgg ccgcgttcct 180

cgcggtgccg gcctcggcga agtccgggga gctgagcgcg atgggggttc tggcggcgaa 240

gggcggcagc ggcgcggggc cgcagaagtg ctcgggcgcg gtggcgagtg gcgacgtgga 300

cgaggcgagg gagctcgggc tgagcggcgg cggcctcggc tccgacgacg cgggtcgggc 360

gacgctggcg cagcgggaagc cgaccaaccg gtacatcagc tacgcggcgc tgcncgcgga 420

ccaagtgccg tgcaacaagc gcgggcggtc ctactacagc aac 463

<210> 4297

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-A9

<400> 4297

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atggacctgg cccgggtcgg ttgcaacaaa ggattccaat aacttcgagg tttgcaacga 120

attgctcgtc agatctggat tgcgtgagac catctagtgc cccaaaagct tctggtttaa 180

caaacggagg gggctcagct gcaagaaagt cccaactgaa gggtgcaaaa agttcagaca 240

tcagaggagg gaatcctgca aaaaagtcac cgcccttaca gaaaaagctg agtgctccct 300

caccaacggt aactaagaag agcgggaactg aaggaaagaa aactccaaat ggaaaaacag 360

gagccaagaa gtaagcaact cagttgaaac ttcgttttgt tgggaccaac ttcaccatgg 420

ccggggacag ataaaca 437

<210> 4298

<211> 445

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B10

<400> 4298

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cgaaagaata gttagggtccc ggtgggtcgat cgaacgaagc tgctgctgct accggccggc 120
cgggcatgac gatgacacgg acgatgtgcc taggcctgct gcttctacta ctggcggcgg 180
cgtagcagc gacggcgcat ttacagggtc gcgatgtgga tgagtacgtg tccaagcgca 240
cgcaggagtc ccgccacagg aacaacgggt gcgcgggcat cgatgacctc atctccagt 300
cgggcggtt ccacgccaac gtggatgcac gcgcctatgg ccgtagatcc gacctgcagg 360
aggaggcaac agctaccgta ataaccaaag cggaagcaca agaggcttca gctgaagggt 420
gcgattaacc tacctaacca tatta 445

<210> 4299

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B11

<400> 4299

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tggtgcacga ggccgccgtc gcgctgcgga gctgaccggc cgggcccggga cgggaccgaa 180
cggaagccta cgatcgactg tacatacagg ggttgggact tgggagggag ctcggttct 240
tggtgggttt tcctttgggt ggagagcgag ggagcgcagt cgagagccag cgagcagtct 300
ctcgtgcagt gcagtgcagt gcagtgcagc tccggcgtag atgagattgt attgtgacca 360
agccgggagg gaaagcaggg atgggaggac aaagatgttt tgtaacgttt caggctccgg 420
ccatcgcccg agtttgt 437

<210> 4300

<211> 304

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B2

<400> 4300

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ttgtatttct cgccgtgggc tcactggcgg ttctgggcgg ctacgatggt atagatatcc 120

tggacgacat ccgcatctga tccagatatc agaattctct gcaagacagg atcgtagcgg 180

gagaggcaac tgatctacgg tcggctacgc aactgctcgt acgcgatcaa gttgacaaac 240

cgctggtttc acctgtaggc gataaagtcc tgcttgcctt ggagaaacat gtcatttctca 300

ttta 304

<210> 4301

<211> 415

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B4

<400> 4301

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ctcagccgcc gcaaccgcca catcagccat gggcgccctgc gcaaccaagc ccaagacgct 120

tgaggggcag gccccagctg aggcgcgctt ctccacaccc aagggttgcg ccgaggccac 180

tccaatctcc gttgaggttg cggctgatga acaggtatct gagaaagtgg tgggtggagga 240

gccggctcgc gcggccgacg ttgagcatca gaaggctaata gaggtgctcg ctccagacgc 300

ggccgtcgcc gagcccgacc acaaggagga ggaagccgtg gagaagaccg tcgtcgagga 360

agagatgcca acggcagcag cccatgcaga ggaaaaggtc gccaccgccg ccgag 415

<210> 4302

<211> 424

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B5

<400> 4302

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cctcgccttg atctccaacc ctttcttcc ttgcttagga gagagagga ggagaggaga 120

ggaggaagaa gatggagagg gcggccccag tgaggagtcc ccacacctcc acggccggcc 180

tactcgctg gcctcaaccc gatggcgccg cgtcgaggc accacgtcgg cctaaccagc 240
 cgacggagga attcaggaag gtggtgttcg gggggcaggt caccgaggag gccgacggtc 300
 tcaacaagac gaagatgacg acgacggcct ccgcacccaa gtcgaaggag acaacaggga 360
 tcggcatgtt taaggccgag agcgccgccc ccgcccgtac aactgcatcc cgtgatcgcc 420
 aagc 424

<210> 4303
 <211> 350
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-009-Q1-E1-B7

<400> 4303

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 ggaggagatg gagaggatgg tggaggcgga gtgggaggag gggatgagga agaggaagcg 120
 gtacgggctg gtggagtacc gggcgctgcc ggcttacctg cgggacaacg agtacatcca 180
 ccgccactac cgctgcgagt ggccgctccc gcaggttctg ctctccgctt tctccatcca 240
 caacgagacc ctcaacgtct ggacgcatct tatacgattt ttcatttttc tcgctctgac 300
 catatacaca gcaacacaag ttccaaatgc agtatatatc cggagcttgc 350

<210> 4304
 <211> 450
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-014-Q1-E1-H7

<400> 4304

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 atgcggctag acgcctcgct acctgcggat gatgacccat ccaatgagac cgctcgcgat 180
 cgcccccca tcattctcaa cgccgtcgcg ctcggaata tcgatgctgg caagtcggct 240
 gtgtggaaca gcctcatcgg ccacctgtg ctgccacgg aaggggaaaa ccacgcgtcg 300
 cagaccgccc ggaacctggg cgcggcgga tcttgccggt tggctgctg gtgaggccgg 360

aatcgctcac tagagccaac tcgtcgctt gcgcccgcg tatatcgtgg ccagcagctt 420
 ctgctctaca atcgctggaa ataccgcctt 450

<210> 4305
 <211> 432
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-014-Q1-E1-H8

<400> 4305

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 agctagacac catacccatg gctcgcgcta gcgtcgtctt cgtcattgct actctcctct 120
 tcgtcgccat ggttgtggca ccgatggccg aggcaaagtc cgctgatgcc cctccgccc 180
 acgccccgc ccccgctgct gacgcacctg ccgatggacc tagcggaccg gcgggtgcac 240
 ctgggtcccca gggcgctcag ggtctatcgg gcaatgagga cgacgatgat gactccacca 300
 actaaggcca agcacgtcgg tccggttgca tttggaacaa gacatggaag aaaagtgaga 360
 gcaatgtcgt ttaaaaccaa aagtcataa taatgtgtgg tcatccgtga tatgttcntg 420
 ctctncctct tt 432

<210> 4306
 <211> 388
 <212> DNA
 <213> Zea mays

<223> unsure at all n locations
 <223> Clone ID: LIB148-015-Q1-E1-A1

<400> 4306

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 acctggtcgt tccctggcat cggcgagttc cagtgtacg acaggttcat gctgagtagc 120
 ttgaaggcgg ctgctgagga agtgggcaag ccgagtgagg gcaacgcggg tccgggagac 180
 tccggcagct acaaggactg gccggaggac acgggcttct tccgggcgga gggcggtcgg 240
 agcacggagt acggggagtt cttcatgagc tggtagctgc agatgtcctt ggagcacggc 300
 gagcgcatcc tgtcggcggc gacgggcgtg ttcacngnng tccccggcgt gaagatctcg 360

gtgaaggtgg ccgggatcca ctggcact 388

<210> 4307

<211> 456

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A10

<400> 4307

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gcattttcac aaacaggctt gcttccggtg acgccagagg tagtcaagaa gacgtgctgt 120
ttgaagagca tgagcatata acagctgatg ggtcaccttc caacggtgac aagttgagcg 180
gcgtagcgaa tcttaaggct gggatttctc tgctcaatat aagactgagg gcacttgaag 240
atgaccagga gtttctcaag cagggtgtga gttccctcca atgcggtagt gatggactgc 300
agtgtataca ggagataagc ggccatctag cagagttgcg aagagttgtg actcgctaag 360
gaaaatggtt ttgccccgag tccaaattgt taggtcatca tgaggtcttc tcatgcagca 420
gactaacgag ggtgcttcca ctgagtgccc acaatc 456

<210> 4308

<211> 437

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A11

<400> 4308

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atggcatgca caaacaatgc gatgagagcc ttgttctctc tggctctctt ctgcatcggt 120
catggtgaga aggaagagtc aaagggcatc gatgcgaaag cgtccggggc tgggtgggtcc 180
ttcgacatca ccaagttggg cgctccggc aatggcaaga cagacagcac gaaggctgtg 240
caggaggcat gggcatcggc gtgcggcggc actgggaagc agacaatcct catacccaag 300
ggcgacttcc ttgtcggaca actcaacttc acaggccctt gcaagggcga cgtgaccatc 360
cagggtggatg gcaatctgct ggcgaccacg gacctaagcc agtacaagga ccatggtaat 420
tggatcgaga ttctacg 437

<210> 4309
 <211> 423
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-A2

 <400> 4309

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ctgccctgcc ctgctgcgcc caagcagctg aatctccgca cagacaatta gagtagctgc  120
attggcgggg aaagcgcaag aagctcagca gaaatggcgg agcaggcagg cgccggaagg  180
tactggtgcc acatgtgcgc cgcggtcgtg agccccgcgg agggcgaggc ggaggtgaag  240
tgcccgcaatt gccacagcgg ctctcttgag gagatggaga ccgtccgcgg cagccccgcg  300
gccgatgacg gcgacgggtga cggcgcggtg gctcaagtgt acccgggcgc cgaccgcccg  360
agctccatct gggcgcacgc tctctcagc acggtcgaca gctccgtccg ccgccgccgc  420
aac                                                                 423
  
```

<210> 4310
 <211> 299
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-A3

 <400> 4310

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agctcaatct tgaaccatag ctagccagca tggcgcccat cagcagcata gcaatactgc  120
tgctcctcgt catcgccgtc gtcctctcag acgtcacctc ctcggggcgcc ctggcctcct  180
cgtcgtcgtc tctgctgcac cagtcgtctc cgtctgagag tgagactgag accgacagta  240
gcagcggaga atcttcgtcg tctcctcgt cgccagaggc actggtacat ccagagcac  299
  
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<210> 4311
 <211> 428
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-A4

<400> 4311

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gatcgagggc caccacctga cctccgctgc catagtcggc caccgacggc cggtttgggc 180
ccagagcacc gcattccac agttcaagac agaggagatg accaacaatca tgaaggactt 240
cgacgagccc gggttcctgg ccccgaccgg cctcttctc ggccccacca agtacatggt 300
catccaaggc gagcccggcg ctgtcatccg cggaagaag ggatctggag gcataactgt 360
gaagaagaca gggcaagcga tgggtgctcg catctacgac gagcccatga ccccggcc 420
gtgcaaca 428

<210> 4312

<211> 433

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A5

<400> 4312

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cagggctctta tctttgttgt ggacagcaat gaccgtgacc gtgttgttga agccagagat 120
gagctccaca ggatgctgaa cgaggatgag ctacgtgatg ctgtgctgct tgtttttgcc 180
aacaagcaag atcttcccaa tgccatgaat gctgctgaga ttactgacaa gcttggatta 240
cactccctgc gccagcgaca ctggtacatc cagagcactt gtgccacaac tggcgagggt 300
ctgtatgaag gcctggactg gctgtccagc aacattgoga gcaaggcttg aggcctacct 360
tgaatgtcaa ccgcgaactg actaggagct ccgatgtat catggaaact caggacagaa 420
tcgcagttgc aac 433

<210> 4313

<211> 365

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<223> Clone ID: LIB148-015-Q1-E1-A6

<400> 4313

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cgggccgcgc agcccagccc ggattacagc accgactacc cegtctccat cccggagttc 120

ggccacccgt cgcgcgcgag cagcgccagc tcagtcgagc gggatgaccg gcggcatcgt 180

ggagggcgcc ggtgagtacg tgatcgacag gtgtgagcgt gatgtgctga cgactaattg 240

actcctgcgc atccctgtca cgtgtgtata gcatatagtc gtcttgctgt aaaaggttat 300

ggcatactcc cctgtttaaa atgtacaggt taaatttggc ttacttcaac aanggattat 360

ataat 365

<210> 4314

<211> 206

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A7

<400> 4314

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gaaaaaaaaa aaaaaacaaa aaaaaaaaaa aaaacaaaaa aaaaaatctc caacacaagg 120

gttgacctca acgatgttcc acgattaggg gccacctcaa tccaacttca taacccttct 180

aatctttcac ggaacttcat gtctctc 206

<210> 4315

<211> 416

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A8

<400> 4315

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gtcgccatgc tagcgggtgt cgccgatgtc gccaacgccg gccacgcaa gccctgacg 120

cctggcgggc gcgtggtaca cgacaaccac ggcaagttca cggccggggc gtggaaacct 180

gcccacgcga ctttctacgg cgggcgggac ggggccggca ccacggcggg cgcgtgcggg 240

tacaaggaca cgcgcgagca ggggtacggc gtgcagacgg tggctgtgag cacggtgttg 300

tttggcgatg ggcggcctg cggcgggtgc tacgaggtgc ggtgctgga cagccccagc 360
gggtgcaagc ccgacgggc ggcgctggtg gtgacggcga ccgacctgtg cccgcc 416

<210> 4316
<211> 373
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-A9

<400> 4316

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aactgccgcy tccgtaggaa gtgctagtgc gtgtgcatca ctaggctgca gctttcatca 180
ttggagatcg atcgcaacag tgcacggttg tgtttagat aaatcgtgtg tttggaatgc 240
tgcccgtaga tactggacaa ctgcaacagt gcttgccctt gcctgctggc cagcatcacc 300
attggcgatg ggcgagcctg cggcgggtgc tacgaggtgc ggtgctgga cagccccagc 360
gggtgcaagc cca 373

<210> 4317
<211> 398
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B10

<400> 4317

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gcgccccagc cgctacgccc tcaaggtctt cgacaagcgc tccgcccgc gcagcaggaa 120
gcctgacgcc gaccgcccgc cgcggtggga gatcagcgtg ctctcccgc ttgcgacccc 180
gcacctcccc tcgtcctcgt gcttcaccga gacggacgac cttctcgcgt gggccgtccc 240
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ccccgcggcc atccgcttct acattgccga gatcgtctcc gcggtcgccg agctccacgc 360
cgcgggcgtc gtgtaccgcc acctcaagcc cgacaacg 398

<210> 4318

<211> 287
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-B11

 <400> 4318

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 tgccgcccgc ctacgcccc gcgcgctaag acgacgaagg cctcgttttc tctcgtgggt 120
 ctgaccatcc aatccaaact caaaagaaca aatacgaaag aagcgtagtg aagggaaca 180
 aatgaatgga tatatgtaat cttgagatgc atgccctctc aaatcactgt actgggggtc 240
 tcaaaaaaat cattgtaatg ggagttatat atataacttt atctcaa 287

<210> 4319
 <211> 417
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-B12

 <400> 4319

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 tttcactgct tgaagacctt tggttctcac ttcacagaag atatcgctat accttcgggt 120
 acgaagattg acttctgtca aacatcagat gggaagctta taacagaaat tgatgggaaa 180
 caaattgggtg ctgttcggag caaagatctt tgcaaggctt tcttcgacat gtatattgggt 240
 gattcaccgg tttcactgga ggccaaaaaa gtcgttgccc agaacgtggc tgggctcatt 300
 ggaagacgct gaggatagcg agaggatggt tatttcattc ttctgtacag ttagagagga 360
 ttcatatgag cgggaaaata ggccaagtat gtagagtgat ctgtcctgta tagaaag 417

<210> 4320
 <211> 319
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-B3

 <400> 4320

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cagcaggaac caggacaagg aagtgctgaa ggtagccatg gtctgcaaga cacaaaggag 120
caggacataa taaagggaaa ggcggctctt gtttccactg aactgctgag ggaggatctg 180
gttcagagtg ctgttagttt tctgaaacac ccgaaagtag tagcctcttc agatggacag 240
aggcgatctt tccttgtaaa taaaggactc accatggatg aaatagatga agcatttcaa 300
cgtctacaaa acccgtcac 319

<210> 4321
<211> 394
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B4

<400> 4321

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ccgcgcgggc tgcttgcggg agcaggggtg cagggcactc cggcaaccac gtgggtgggg 120
aggcgacgac accaccctag gctctgtcct cgccgcagg gtaagattgc agcagcagtg 180
aatttgggag cttgaagcat tcctctgaga catggaaaaa gtgatctgct gggcatatct 240
ccttcaacgc aagcagttct cgaaagaaac tcttgattgc tgtgtcgtag ctctgtggaa 300
cactcctctc ccctctctcg tgaactacac atagtgatta tatgttccct ctatgctcaa 360
cagcaagcag gctgatgcga tattttgctg aagt 394

<210> 4322
<211> 432
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B5

<400> 4322

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agcttgccat ggcgggcgctc cgggtccgaca ggggtccacca ccaccaccgc cgctccgagg 120
cgtcgtgtcc ggcaacctcc gcggccgtgg cgggcgcgag ggccgatgac gccctgcgcc 180
agcgcccgcg ggggctcgtg caggtccggg agcgggacca gggcccgtg tcgacggggc 240
accagcacct gcaccacat caccaccagc tgcggcggtc ggcgggcgttc ccaccccgcc 300

gcccggggcc ggggcgcgc cctcctcagc gctgcgaaag cgacctcaac atcagggagc 360
 accgctcctg cagcgaggtg gccggcggca acgcggcggg ctgcgcgcgt gtgtgctgct 420
 gcttcccctg cg 432

<210> 4323
 <211> 415
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-015-Q1-E1-B6

 <400> 4323

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 ggacctcttc cgcaagtgc tggagcccgt ggagaagtgc ctccgcgacg ccaagatgga 120
 caagagcagc gtgcaggacg tcgttctcgt gggcggtcc actcgcatcc cccgcgtgca 180
 gcagctgctc caggacttct tcaacggcaa ggagttgtgc aagagcatca acccagacga 240
 ggctgtcgcg tacggagcgg ccgtccaggc cgccatcctc actggcgagg gcaatgagaa 300
 ggttcaggat ctgctcctgc tcgacgtctc gccgctctcg ctgggcctgg agacggccgg 360
 atgcctcatg actgtgtctc tcgccaggaa caccaccatc ccgactaaga aggag 415

<210> 4324
 <211> 398
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-015-Q1-E1-B7

 <400> 4324

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 taatgaagag ccgcagcatg gcatcatcgg ccgcgctctt ggtgctagcc ctgcgctag 120
 tggcgccac cgccccacag gtagcggagg caaagaagaa gagagcggcg gagagcggcg 180
 aggcggcgga ggcaagaag atccaggacg acttctgctc gacgctgtgc gagggcaaga 240
 aggggacgga cctggtcgtg tgcaaggagt cctgcgcgct ctcccagcag tccaacctgg 300
 tgctgtacgg caggatccag tgcaagggca agtgcaccga gcagaagggc atcacggcgc 360

cggccatgaa ggtctgccaan gaggagtgcg acaaggcg

398

<210> 4325

<211> 423

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B8

<400> 4325

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gcggcgccac tgggaagcag acaatcctca taccacggg tgacttcctt gtcggacaac 120

tcagcttcac aggcccttgc agtggcgacg tgaccatcca ggtggatggc aatctgctgg 180

cgaccacgga cctaagccag tataaggacc atggtaattg gatcgagatt ctacgtgtgg 240

ataacctggt catcacgggc aagggaacc ttgacgggca cggcccagcc gtgtggagca 300

agaactcctg cacgatgaag tacgactgca agatccttcc caactcgctg gtgatggact 360

tcgtgaacaa cggggacgtg tccggtgtca cgctgctcaa ctccaagttc gtccacaatg 420

aca 423

<210> 4326

<211> 421

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-B9

<400> 4326

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ggaggagtgc gcagcgtact gccggagggg aaagggaagg agaagggtgg aaatggagga 120

ccggcatgtg gccaaagtcg ctctcggcgg ggacccccaa gtggcactgt ttggtgtgtt 180

cgatggccac ggccgggaaaa acgcggcaga gttcgccgcg gagaacatgc ccaagtttat 240

ggccgaggag ttgacgaagg taaacggcgg agagatcgaa ggagcgggtga agaggggtta 300

cctcaagacg gacgaggagt tcctcaagat ggacgagagc gggggcgcggt gctgcgtcac 360

agccgtcctc caaaagggtg gactggtcgt ctccaacgct ggagactgcc gtgcggtgct 420

c 421

<210> 4327
 <211> 446
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C1

<400> 4327

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gcgcgcggtg gcgggccggt agaagctttg ttcgttgcat ttgaattcat caccaaagga 180
gaaggcgcct gttggcgctt caccaattcc atcccatcgc cacaaggctc tcgatcacgc 240
ggatcgtcgc gactgaccgg ccggcctcct cagccgtcct tgttggtgcta caagatcgag 300
gcgacaggat ccagccagcc acgatgtcgg cggccggcgc caccgccgtc tgcacgaagg 360
acggcggcct cctcccgtg cgtccgcact gcgcgaggtc gtctctctcc ttcgccgccg 420
ccgccgccgg catcgtgatc tacctg 446
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<210> 4328
 <211> 452
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C11

<400> 4328

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gacgcgatgt cgtccggcaa caagatcagc gtggccttgc tgagcgtggc cctagtgggc 120
ctgctcctct gccacctcgc caccaccgcc tccgccacc agaaagacat ccacgtcctc 180
ggcagcgtcg acggctccag cgacggcagc agccccgagt ccgaaggccg cgtcgtctac 240
gcggacatga agctggctga tacggaatcc gatgcgccgg cgccggcgcc ggccgccggg 300
ccgtcgtccg gttgaactga gaagcgtgcg tccagccaag caaggtggtc aaaaccgaga 360
actaattaag ggctcgattg tgtgtccggc tactactgtt cttgccataa ttatatatag 420
atacgcaaag tgtggccaag cctaccaca tg 452
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<210> 4329

<211> 410
 <212> DNA
 <213> Zea mays

 <223> Clone ID: LIB148-015-Q1-E1-C12

 <400> 4329

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 cggcgacgtc ccagagaagg agtcgtccgc caacggcttc accctggtcg ggctcagaac 120
 catcgacatc gccaaagtcca ccgtagaggg catgtgcccc ggcaaggtct cgtgcgcaga 180
 catcctggcc ttgcggggcg gcgacgccgc cgtggccgcg ggctctccga gatacgaggt 240
 cgcggcgggg cgccgcgacg gcatgcgctc gaacatggac gacctcccg gcaacttccc 300
 cgtgccgggc caccacgtgc cgcgcctcac cgagctcttc agccagcggg ggctctccca 360
 ggaggacctc gtctgtctct ccggcgcgca ctccatcggc ggcgcgcaact 410

<210> 4330
 <211> 421
 <212> DNA
 <213> Zea mays

 <223> unsure at all n locations
 <223> Clone ID: LIB148-015-Q1-E1-C2

 <400> 4330

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 agggccgggt gagcacgagc gctgcccgtc cgctgaacca tggcggggtc cgcggtggcc 120
 gtcgtcctcc tgcggccgt cgcgtgctc tgctgtacc acctcctttt cctctccctg 180
 tccgtcccg acccggcagc agcagcagca gccgtcccc gccgcgccg tggccaccgt 240
 ggcagcaacg ttccgtccg gtcaggaacc gccaacgtcg tcttcgctt cggcctgtcc 300
 gggcagccgc tccgctcca cgacccgcc gccgcgccg gcctcccgga catcgacacc 360
 ttccgcgga agctcgancg gctgctttct cccggacgac acgaccccg ctggtcgcgc 420
 c 421

<210> 4331
 <211> 421
 <212> DNA
 <213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C4

<400> 4331

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gcctccctca ccaaataagg tcccgcctt ttccgacatt cacagggggg acaggaaatc 120
agcggccatg gcctcgattc cggcgacgac cttcgccgtc atcttatccg tcctcttctg 180
tgccgcggct ggcaccgccg tcgacaacga cctccccgac tacgtcatcc agggccgcgt 240
ctattgcgac acctgcgcg cggggttcgt gaccaatgtc accgagtaca tcgcggggcg 300
caaggtgagg ctggagtgcg agcatttcg caccggcaag ctcgagcgct ccatcgacgg 360
ggtgaccgac gggaacggca cgtacacgat cgagctcaag gacagccacc aggaggacat 420
c 421

<210> 4332

<211> 401

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C5

<400> 4332

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ctcctggtcc tcttctgcat cgtgcatggt gagaaggaag agtcaaaggg catcgatgcg 120
aaagcgtccg ggcttggtgg gtccttcgac atcaccaagt tgggcgcctc cggcaatggc 180
aagacagaca gcacgaaggc tgtgcaggag gcatgggcat cggcgtgcgg cggcactggg 240
aagcagacaa tcctcatacc caagggtgac ttccttgctg gacaactcaa cttcacaggc 300
ccttgcaagg gcgacgtgac catccaggtg gatggcaatc tgctggcgac cacggaccta 360
agccagtaca aggaccatgg taattggatc gagattctac g 401

<210> 4333

<211> 399

<212> DNA

<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-C6

<400> 4333

ccacgcgtcc agcttaattg cgccactgct cgttatcctc ctcttgcatg gcattgcagg 60
tcgtagttga gcagcagcaa ccactgcaca ggatgtcgtg gcagacgtac gtcgatgagc 120
acctcatgtg cgagatcgag ggccaccacc tgagctctgc cgccatagtc ggccacgacg 180
gcgcccgtttg ggcccagagc accgcattcc cacagttcaa gccagaggag atgaccaaca 240
tcattaagga cttcgacgag cctgggtttc tggccccgat cggcctcttc cttggcccca 300
ccaagtacat ggatcatcaa ggcgagcccg gcgctgtcat ccgcggaag aagggatctg 360
gaggcataac tgtgaagaag accggacagg cgctggtga 399

<210> 4334
<211> 388
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-015-Q1-E1-C7

<400> 4334
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gctccaagcc ccgccccgt ctcgcccct tagttgctg ttggggcgcc ctgcccgcg 120
gccccggcc accatgcgtc gtgtctgctc gcgcacgcac gcattgaacg ggagatagaa 180
tatggtatcg ttcaatgcag attgccatgc tatagctcca gagtttatct acctggtagc 240
accatgacac gatggccgct tcgtattttc tggcttgtc gtacttttca gttccatggt 300
tttacaacac cttttactcc cagcagaaaa tacataatat gcattgtactc ctcttttttt 360
ccgtatagta atataaaca attttcac 388

<210> 4335
<211> 379
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-015-Q1-E1-C8

<400> 4335
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atactaataa tttatcacta tacataacca atatataagc catgggcaag cgcagcgtcc 120
ctcggtaccc tgaggacgag gacaaacgag gctgctgcgg ctgcctgtgc tgggtgtgct 180

gcttcctggtt gttcatcgtg gggcgctgg ccggcacggc cgcctacttc ttcttcgtgt 240
acaagcccaa ggcgcggtcc tactccgtga gcaacatgtc cgtctcgag ttcgacttca 300
gcacctccga cctgacgctg tacgtcaagc tcagcgctc cgtgcgacc gagaacccca 360
acgagatgat caccatcag 379

<210> 4336
<211> 424
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-015-Q1-E1-C9
<400> 4336

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agccagctcg cgaaaataat gaagagccgc agcatggcat catcggccgc gctcttggtg 120
ctagccctcg cgctagtggc ggccaccgcc ccacaggtag cggaggcaaa gaagaagaga 180
gcggcggaga gcggcgaggc ggcggaggcg aagaagatcc aggacgactt ctgctcgacg 240
ctgtgcgagg gcaagaaggg gacggacctg gtcgtgtgca aggagtctg cgcgctctcc 300
cagcagtcca acctggtgct gtacggcagg atccagtgca agggcaagtg caccgagcag 360
aagggcatca cggcgccggc catgaaggtc tgccaggagg agtgcgacaa ggcgtacgtg 420
gtga 424

<210> 4337
<211> 403
<212> DNA
<213> Zea mays
<223> Clone ID: LIB148-015-Q1-E1-D1
<400> 4337

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cttgcccaca agttcacgaa gttgcgagtt ctactcgcc ggcagaacac acctcagctt 120
gaacacagtg ccgtacaagc tgttgccaac tactgccatg acctacgtga gttacacctc 180
accagaagct tcaggcttat tgaccgctcc ttgtatgcac tggcccatgg atgccacgg 240
cttacaacac tgaacattag tggatgttcc actttcagcg aactgcctt gatttacctt 300

agctgccgct gtagtcacct caagtgcctg aacttgtgtg gatacgtaca ggctgttact 360
gacacagctt tgcacgctat tgctcacaac tgtgggcagc tgc 403

<210> 4338
<211> 410
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-D11

<400> 4338

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gcgacatgtc cttcgccgtc cacgccgcca agcgttcggg gcagcgcttc tccttctgcc 120
tgctcagcgc caacagctcc cgcgacgcct ccagctacct caccttcggg cccaaccggg 180
cggatgatggg tccgggcacc atggagacgg acatcctgta caacgtggac gtgaagcctg 240
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aggtgtggga cgccgagagg tttgtgggcg gcggtgtcat cctagacacg agcacgtcgg 360
tgacgtcgct ggtgccggag gcgtacgcgc cggtgacggc ggcgctggac 410

<210> 4339
<211> 421
<212> DNA
<213> Zea mays

<223> Clone ID: LIB148-015-Q1-E1-D12

<400> 4339

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ccaagggcga cggcaagtcg gacagcacc ccatgatcct caaggcgtgg aagaacgcgt 120
gcgaggcgac ggggggtacag aagatcgta tcccgcggg caactacctg acgggcgggc 180
tgagctgaa gggcccctgc aagtcctcca tcatcatccg tctcgacggc aacctgctcg 240
gcaccggcga cctcagcgcg taccaaagga actggatcga gatcgagaac gtcgagaacc 300
tgtccatcaa cggccacggc accatcgacg ggcagggagc cctgggtgtg agcaagaacc 360
agtgcagca ttcttacaat tgcaagatcc tcgcgaatag cttgggtgctg gatattgtga 420

c 421